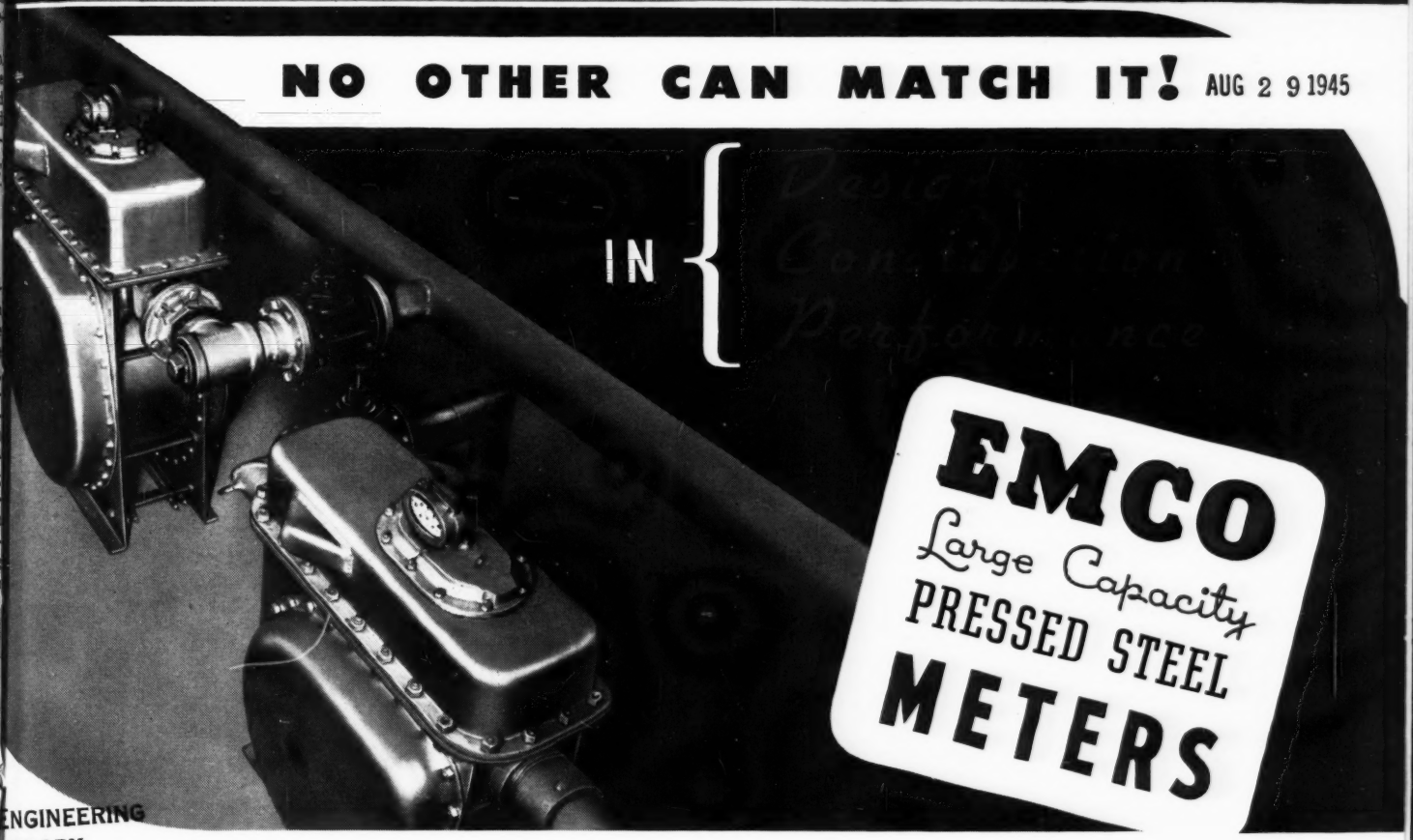
GAS

ENGINEERING • UTILIZATION • LOAD-BUILDING • MANAGEMENT

NO OTHER CAN MATCH IT!

AUG 2 9 1945

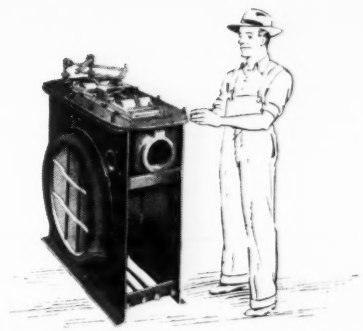


ENGINEERING LIBRARY

It takes big meters for big jobs. But size alone doesn't tell the whole story. Strength, installation ease, maintenance accessibility, and the floor area required per setting are important factors in selecting a meter for any large volume installation.

EMCO Pressed Steel Meters take top rank on every score. While giants in capacity, they require less floor space per cubic foot than any other meter. Their exclusive reinforced pressed steel construction makes them extremely rugged, yet light in weight. Their compact design makes manifolding possible without crowding, thereby providing full accessibility for routine reading and examination.

Distribution engineers, when encountering loads varying from zero to 10,000 cubic feet per hour, have learned to rely on an EMCO Pressed Steel Meter to handle the job with complete satisfaction.



EMCO PRESSED STEEL METER FEATURES

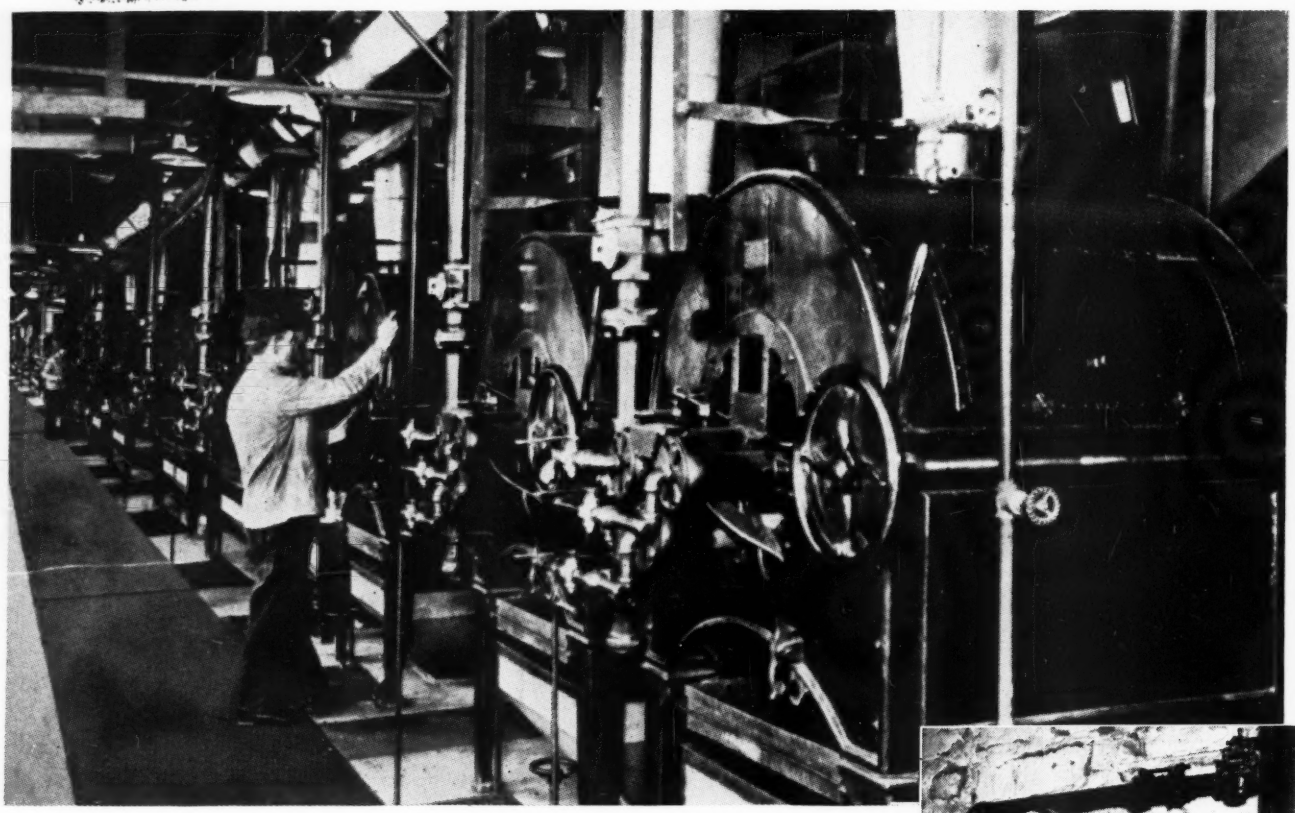
Removing top cover exposes tangent, tangent arm, and adjustments. Diaphragm retained by clamping band and screw. Large diaphragm area. Heavy, oversize parts to take all driving strains without stress or deflection. Pressed steel case built around cast iron valve plate. All moving parts carried and aligned by rigid valve plate. Extremely compact case; requires very small floor space. Construction reduces leakage risks; eliminates hazards.

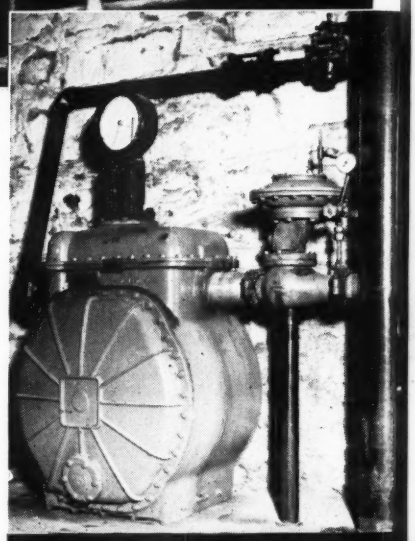
PITTSBURGH EQUITABLE METER COMPANY

Atlanta Houston **MERCO NORDSTROM VALVE CO.** Los Angeles Boston
Chicago Pittsburgh Main Offices, PITTSBURGH, PA. Tulsa Seattle
Kansas City San Francisco New York
National Meter Division, Brooklyn, N. Y.

EMCO *Specialized* EQUIPMENT *for* GAS MEASUREMENT *and* CONTROL

…USED WHEREVER *Gas* CONTROL IS *Quality* CONTROL





A Typical Battery of Roasters. Choicest Blends of Finer Coffees are here brought to the Peak of Piquancy by Careful Control.

Reliance Regulators are adapted to the most delicate or the most rugged application in the gas industry.

Reliance Regulators meet every type of gas application. Types and sizes have been engineered to insure maximum efficiency with low cost of installation for your particular needs.

RELIANCE REGULATORS

Reliance Bulletins give complete info… mation. Write today for catalogs.

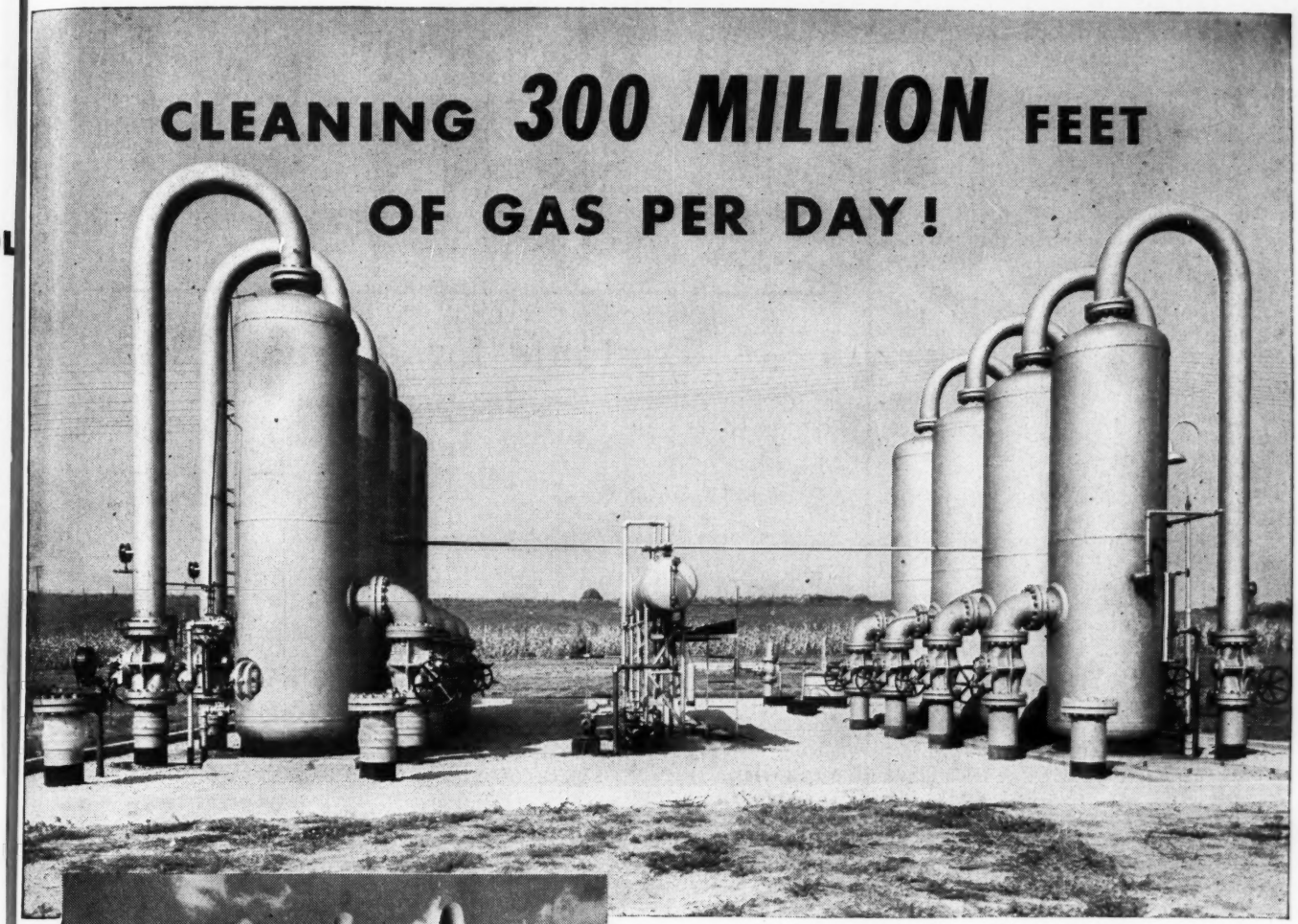
RELIANCE

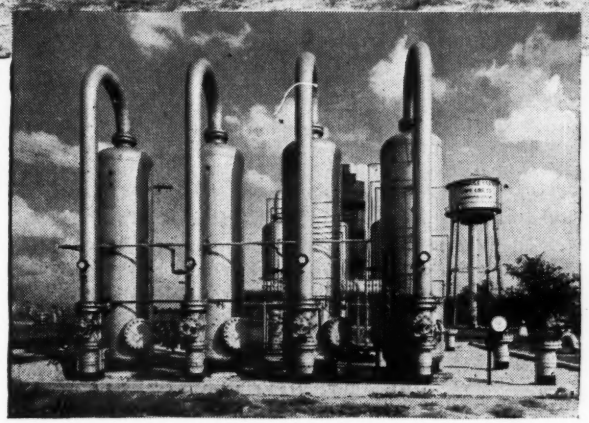
AMERICAN METER CO. EST 1836

AMERICAN METE…

GA…

CLEANING *300 MILLION* FEET OF GAS PER DAY!





In the above photograph note small piping and instruments in foreground. These make up an experimental installation to determine pressure loss... Data obtained showed a very small overall loss through the Blaw-Knox Conditioners.

The part that Blaw-Knox Gas Conditioning plays in maintaining consumer goodwill, reducing service calls and protecting equipment is daily receiving increased recognition by gas companies. Proof of this is found in repeat orders from concerns who, having proved Blaw-Knox Gas Conditioners to their own satisfaction, buy additional units. Our Bulletin No. 1578 describes Blaw-Knox Gas Conditioning equipment in detail and explains why leading operating engineers prefer it. Ask for a copy.

ARMY NAVY

6 plants of Blaw-Knox Company have been awarded the Army-Navy "E" for excellence

BLAW-KNOX GAS CLEANERS

BLAW-KNOX DIVISION of Blaw-Knox Company
2033 Farmers Bank Building, Pittsburgh, Pennsylvania

NEW YORK CHICAGO BIRMINGHAM PHILADELPHIA WASHINGTON

Advertisers

American Brass Co. 20
American Cast Iron Pipe Co. 82
American Meter Co. —
American Radiator & Standard Sanitary Corp. 49
American Recording Chart Co. 84
American Stove Co. 75
Barrett Division 21
W. A. Bechtel Company —
Blaw-Knox Company 1
Bryant Heater Co. —
Carbide & Carbon Chemical Corp. 78
Cast Iron Pipe Research Association 6, 7
Clark Bros. Co., Inc. 19
The Cleveland Trencher Co. 70
The Coleman Co., Inc. —
Connelly Iron Sponge & Governor Co. 84
The Cooper-Bessemer Corp. 11
Crane Co. 13
Cribben & Sexton Co. 22
Dearborn Chemical Co. 10
Domestic Thermostat Co. 79
Dresser Industries, Inc. 4, 5, 19, 74, 81, Fourth Cover
Fisher Governor Co. —
Florence Stove Co. 61
The Fluor Corp., Ltd. 26
General Controls Third Cover
General Gas Light Co. 77
James Graham Manufacturing Co. 67
E. F. Griffiths Co. 74
Hammel Radiator Engineering Co. 83
H-M Regulator Co. 82
H-M Thermo Control Co. 82
Hardwick Stove Co. 55
Harper-Wyman Co. 51, 52
Johns-Manville 76
Kitson Co. —
Merco Nordstrom Valve Co 17, 18, Front Cover
Lee B. Mettler Co. —
Milwaukee Gas Specialty Co. 14
Minneapolis-Honeywell Regulator Co. —
Mueller Co. 16
National Tube Co. 3
Natural Gas Odorizing Co. 8
Norton-McMurray Mfg. Co. 80
Pacific Coast Gas Association 72
Pacific Gas & Electric Co. 69
Payne Furnace Co. Fourth Cover
Phillips Petroleum Co. 25
Pittsburgh Equitable Meter Co. Front Cover, 17, 18
Reliance Regulator Corp. Second Cover
Remington Rand, Inc. 15
Reynolds Gas Regulator Co. 83
Rheem Manufacturing Co. 58
Robertshaw Thermostat Co. —
Roots-Connersville Blower Corp. 81
Geo. D. Roper Corp. 71
Ruud Manufacturing Co. 63
Semet-Solvay Engineering Corp. 70
Servel, Inc. 56, 57
Sharples Chemicals, Inc. —
M. B. Skinner Co. 76
A. O. Smith Corp. 65
Spencer Thermostat Co. 78
Sprague Meter Co. 9
Stacey Brothers Gas Construction Co. 74
Titan Valve & Mfg. Co. 28
Union Carbide & Carbon Corp. 78
U. S. Pipe & Foundry Co. 12
United States Steel 3
Utility Appliance Corp. —
Vapor Recovery Systems Co. 80
Vulcan Proofing Co. —
Walworth Co. —
Ward Heater Co. 73
Warren Petroleum Corp. 68
Webster Engineering Co. 66
Welsbach Engineering & Management Corp. 82
Whitehead Metals Products Co. 63

GAS

REG. U. S. PATENT OFFICE

Twenty-First Year of Publication

Contents for August, 1945

EDITORIAL COMMENT

Thermally Thinking ..... *By Elliott Taylor* 2
Highlights 2
Postwar Notes and Notions ..... *By Stanley Jenks* 5

FEATURE ARTICLES

War and Postwar Wage Controls in the Gas and Oil Industries ..... *By Theodore W. Kheel* 2
The Western Appliance Market and the Manufacturers' Part in Selling It Postwar ..... *By O. R. Doerr* 3
The Midwest Personnel Conference—Its Purposes and Activities ..... *By C. C. Jolley* 3
Canadian Gas Investigation to Resume 3
Wolf to Succeed Forward as A.G.A. Director 3
School for Heating Equipment Servicemen ..... *By L. M. Hull* 3
Gas Ranges Fly West 3
Standardized Dimensions of Equipment for the New Freedom Gas Kitchen 3
Training Program for Gas Appliance Servicemen No. 2 Orientation ..... *By C. C. Westmoreland* 4
Report Blames Tank Failure for Cleveland Fire 4
Corrosion and Protection of Buried Metallic Structures ..... *Edited by Guy Corfield*
Locating and Spacing Galvanic Anodes ..... *By O. C. Mudd* 4
Immersion Tube Heating With Gas ..... *By Maurice J. Dewey* 4

DEPARTMENTS

Operating Ideas 54
Associations 60
New Products 62
People 64
Pipeline News 7
Current Reading 8
Books and Pamphlets 8
Awards 8

Publication Office: **LOS ANGELES 14, California, 1709 West Eighth Street, DRexel 4337.**

Branches: **NEW YORK 17, 50 E. 42nd Street, MUrray Hill 2-4504; WASHINGTON, D. C., 306 National Trust & Savings Building, District 0215; CHICAGO 3, Illinois, 1064 Peoples Gas Building, HARrison 6634.**

JAY JENKINS.....President
JAMES E. JENKINS.....Secretary-Treasurer
ROY D. CRIPPEN..... General Manager
L. V. HOHL.....Eastern Manager
DAVID CARMEN.....Mid-West Manager
ARTHUR ROHMAN.....Editor
ELLIOTT TAYLOR.....Washington Editor
GUY CORFIELD.....Technical Editor
O. D. HALL.....Mid-Continent Editor
PAUL LADY.....Assistant Editor

August, 1945. Volume XXI. Number 8. GAS is published monthly by Western Business Papers, Inc., 1709 West Eighth Street, Suite 320, Los Angeles 14, California. Subscription price: United States, Mexico, Cuba, South and Central American countries (in advance), 25 cents the copy; two years for $3.00, $2.00 per year. Canada and all other countries, $3.00 per year. Entered as second-class matter August 20, 1936, at the post office at Los Angeles 14, Calif., under the Act of March 3, 1879. Member: Audit Bureau of Circulation; Associated Business Papers, Inc. Publishers: BUTANE-Propane News; Handbook BUTANE-PROPANE GASES; THE BOTTLED GAS MANUAL; WESTERN METALS.

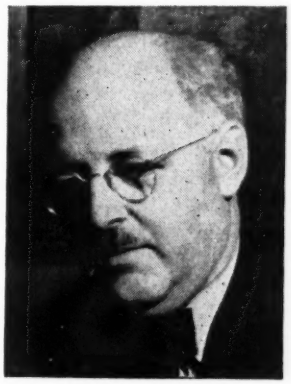
THERMALLY THINKING

By ELLIOTT TAYLOR, Washington Editor

Theatrical Technique

To the Office of Defense Transportation:

In accordance with what we took to be our patriotic duty in the matter we have written one or two little pieces urging our readers to stay off the trains and not to attend any clambakes, conventions, rug cuttings or round-ups in herds of 50 or over, and to refrain from even making lone-wolf Pullman hops whenever they could possibly be avoided.



Elliott Taylor

The American Gas Association which, as you may guess, is in a way one of our principal clients, called off its 1944 convention and is all prepared to forego this noisy nexus of industry solidarity for 1945 as well, if it will help beat the Jap, which as we understand it, you say is the case. Other organizations in the gas industry, while they may not have quite the staggering characteristics of the A.G.A., have been wont to hold annual meetings, too, and these they have all given up in the interests of victory.

But now we are worried over a problem of outside influence that we are powerless to combat, and which we fear is going to ruin the no-travel record of our industry. Gas men, utility commissioners and lawyers, oil men, coal men and reporters, stenographers, trial examiners and just plain politicians, (if you will pardon the expression) will soon be tearing around from town to town in the middle west in their roles as star performers, supers, mob scene extras and stand-ins in the big natural-gas investigation show that the Federal Power Commission has booked for an indefinite stand starting in Kansas City, on September 18, next jumping to Oklahoma City, October 9th, and opening in New Orleans October 30th. Before the close of the New Orleans run the commissioners hope to be able to announce an engagement in some city in Texas after which the attraction will be pulled in for its Washington, D. C., premiere.

Now our problem, Mr. Johnson, is this: If our gang gets to tallyhootin' round again to meetings and the like, the way the FPC is encouraging them to do, they will get the impression that this keep-off-the-trains and keep-out-of-the-hotels stuff is all a lot of malarkey as far as the politicians are concerned. So then the next conclusion would be why not go ahead and have a meeting of our own, say in Atlantic City in October, and just keep the attendance down to those who want to talk about the FPC investigations and such subjects.

You know how those things are done; about forty-nine of the delegates would go to the convention and the other 451-odd would just happen to be around in the neighborhood anyhow and would be within walking distance of the hall so they might as well just drop in for a couple, three hours each day to see if anyone is around that they know.

That sort of an out would be strictly black market in our book, because there isn't anything about the FPC investigations that needs to be talked over right now, either in Kansas City, Missouri, or in Atlantic City, New Jersey. And while the commissioners will probably be able to put on a good feature attraction when they take their show on the road, we believe the public would be more receptive to the piece if it were held up until after victory in the Pacific.

It has got so that the Commission never pays any attention to what we say, so we thought we would just mention it to you, and if you think the idea rates a try, you might get someone like Chairman Manley on the phone and ask him what this Orpheum Circuit approach has got that couldn't be accomplished by a few plain old-fashioned questionnaires. Or for that matter, by just a few plain Old Fashioneds.

Straws

THE MEMBERS of the American Petroleum Institute are considering raising a million dollar a year budget for the next 10 years to be used to publicize the industry.

The Petroleum Industry War Council will spend $300,000 to publicize a PAW signed report on the successful wartime partnership between government and the oil industry.

A new National Association of Electric Light and Power Companies has been formed and is opening headquarters in Washington, D. C. This organization will concentrate its efforts on relations between government and the electric power industry.

These activities are only straws in the wind—but they do point to one unavoidable conclusion, that the

relations between the various important power and fuel industries and the government are due for expert and objective consideration as the questions of post-war policies and activities loom larger by the hour.

Whether there is internal harmony and unanimity of opinion and attitude on matters of industry policy within the ranks of the oil companies and the electric light and power companies we are not in a position to say. The surface evidence would indicate that they have effected a pretty smooth working spirit of intermural co-operation.

But we cannot in candor report that the same thing is true of the gas industry. The Washington office of the American Gas Association has long since been reduced to the status of a high-priced errand service utilized by only a handful of members. And the new Independent Natural Gas Association, while it has been vigorous and aggressive in its outward aspect, has given no evidence that it is prepared to tackle all of the industry's problems with the interest and energy it has displayed in natural gas transmission matters.

The conclusion is that the need still remains, and the demand is more imperative than ever, for a top flight gas industry policy committee that can formulate a long range viewpoint of the position that the gas utilities should occupy in American economic life.

Once formulated, this viewpoint should dominate every joint activity that is undertaken by the gas companies. It should be the magna carta to which every cooperative presentation should conform. It should be the basis of a public relations and publicity campaign that would transcend or replace the halting and inconclusive attempts that now damn this activity to perpetual futility.

If the gas industry Steering Committee now forming to spearhead the presentation of natural gas testimony in the forthcoming Federal Power Commission hearings is capable of thinking in big enough terms, it can take on the permanent industry policy assignment principally by default. For the committee will represent both Independent Natural and American Gas Association members.

There are minor assignments and areas of influence that can best be handled by one or the other of the two national associations, just as there are activities and problems that rightly fall entirely within the purview of state and regional organizations. But the big job of welding the policy of the gas industry into a coherent and explainable credo, and of selling that conception into a universal public acceptance is still to be undertaken. It is the biggest single assignment that gas men have ever had to tackle.

Due for Appraisal

A NEW DEVIL has risen to plague the promoters of the "CP" range campaign of the Association of Gas Appliance and Equipment Manufacturers. It takes the form of a packaged home scheme of an outfit in Milwaukee which announces plans to build and sell completely equipped houses in the post-war market. "CP" with them apparently means Complete Package, and their literature describes "'CP' How it Works"; "'CP' Backed by Integrity" and "'CP' Homes." But the unkindest cut of all is the fact that the new packaged homes are to have electric ranges in all of their kitchens!

A.G.A.E.M. attorneys will no doubt be able to straighten the matter out as they have in times past, and drive the poachers of the sacred preserves of "CP." This will leave the mystic symbol as again the exclusive trade mark of the group of stove builders who support the "CP" range campaign.

The question that we believe should now be considered by the stove makers, however, is whether the campaign is worth keeping alive even if the law does give the industry the exclusive use of the letters "CP" (providing they are always in quotes).

A letter sent out by the American Gas Association Domestic Range Committee some months ago admitted that "Several recently made studies indicate that consumers do not have a clear understanding of what the "CP" trademark represents." From what we have heard of these consumer surveys this is a rhapsody of understatement to say the least. As we heard it, the consumers not only didn't "have a clear understanding" of what "CP" meant—most of them had never even heard of it. Many didn't believe it meant anything at all. The use of the words certified performance in connection with "CP" is now forbidden on the grounds that it might make "CP" a grade mark instead of a trade mark, thus leaving it open to the use of anyone who built to the required standards.

So if the customer asks what "CP" means, the domestic gas range committee suggests that he be given any one or all of a set of tedious and unconvincing explanations, not one of which dares admit that there is any connection between certified performance and the "CP" initials.

Obviously something has to be done about "CP," for while it exists it is the major gas range promotion, and it precludes an impartial study of any other plans that might otherwise be considered by the industry. We believe it should be recognized that "CP" did a good job in the past. It raised the sights of gas range salesmen to quality merchandise, it increased the average unit price of utility sold stoves by a substantial amount in many territories. But that does not guarantee that under new and changing conditions in the post-war appliance field a warmed-over pre-war campaign will prove adequate to meet the challenge of competition.

Instead of blindly trying to bull "CP" through, the A.G.A.E.M. and the Domestic Gas Range Committee of the A.G.A. should reappraise its value to both manufacturers and utilities in the light of its legal position. They should then decide whether or not the promotion is suitable for remodeling into a 1946 selling activity that will run with the best in the field.

Manufacturers have complained that the utilities are lax in supporting the present phase of the "CP" campaign. Some gas companies on the other hand have opined that the old promotion has outlived its usefulness and should be liquidated to make way for something new and challenging in the way of post-war appliance selling plans.

We do not recommend that the "CP" campaign be abandoned unless a careful appraisal of its value by both the utilities and the manufacturers should disclose that its days of usefulness are over. We do recommend that such an appraisal be undertaken at an early date. A campaign that requires interminable letters of explanation to the industry, that can't define the meanings of the two initials in its trade mark, and that appears to have only lukewarm support from the gas utilities who should be its most active champions certainly needs one of two things. It needs a big shot in the arm, or it needs the axe across its neck.

Highlights

Gas cooking and heating stoves were released from rationing on Aug. 1, enabling purchasers to procure these appliances without priority for the first time since Aug. 24, 1943. Rationing continues for oil heating and cooking stoves and for gas-oil combinations.

●

Natural gas won a round in the battle of Wisconsin when permission to construct the first natural gas line in the State was granted to Wisconsin Southern Gas Co. last month by the Public Service Commission. The company will build a 4½-in. line from the southern state border to Lake Geneva where natural will be substituted for manufactured gas throughout the company's system which serves Burlington, Lake Geneva, Williams Bay, Fontana, and other communities. Each of the local governments has complied with the "local option" law, which calls for approval in each community before natural can be substituted for manufactured gas. The gas will be served subject to the special state tax of 7c per Mcf.

●

H. Carl Wolf, president, Atlanta Gas Light Co., will become managing director of the American Gas Association on Oct. 1, succeeding Major Alexander Forward, who will retire. (Page 35).

●

Pipelines: FPC will hold a hearing Oct. 15 on the application of *Metropolitan Eastern Corporation* to build an 825-mile, 18-in. natural gas line from the Carthage Field, Panola County, Texas, to a point near Hamilton, Ohio. *Natural Gas Pipeline Co. of America* and *Texoma Natural Gas Co.* are seeking FPC authority to enlarge their combined system from 268 MMcf per day to 349 MMcf. *American Light and Traction Co.* is expected to apply for FPC permission to build a 27¾-in. line which would carry 300 MMcf daily from the Hugoton field in Kansas to a point 65 miles from Detroit where the gas would be stored underground for use during peaks. (See Page 72).

●

First hearing before the Federal Power Commission (which last month stated that it did not seek to extend its control to cover natural gas or oil production or petroleum pipelines) investigation of the natural gas industry is scheduled for Kansas City, Sept. 18. Other hearings will be held in Oklahoma City, Oct. 9 and in New Orleans, Oct. 30. Meanwhile the Senate inquiry into natural gas matters has progressed to a point where a hearing scheduled for Oct. 9 will be held to take testimony involving the conversion of the "Big Inch" oil line to gas. (See Page 23).

The Hetch Hetchy dispute, which has eight times brought San Franciscans to the polls to vote "no" on public ownership of Pacific Gas and Electric Co.'s electric properties was settled last month when both the U. S. District Court and Secretary Ickes approved a contract for the sale of Hetch Hetchy power by the City of San Francisco to the Modesto-Turlock Irrigation District. Under the Raker Act the Districts cannot sell Hetch Hetchy power to privately owned utilities. The City, however, will pay P. G. and E. about $700,000 annually for use of its facilities in distributing power to its railway system and public buildings. Under the contract the City is not required to enter the electric utility business nor are officials committed to agitate for another public ownership election.

●

The Pacific Coast Gas Association has estimated that four million gas appliances will be required for replacement needs and new sales in its territory in the immediate postwar years. Sales in the immediate postwar period of 300,000 ranges and water heaters, 200,000 new central heating installations are foreseen, with about 70% being replacement.

●

Structural failure of cylindrical tank No. 4 of The East Ohio Gas Co.'s natural gas liquefaction plant was formally charged as the reason for Cleveland's most disastrous fire last October in the report of Coroner Samuel R. Gerber made public July 24. Stating that the utility, the state and city governments must accept a share of the responsibility, the report particularly pointed out that the Pittsburgh-Des Moines Steel Co., which designed, recommended, and built the tank, failed to conduct proper research work to determine whether or not the type of tank recommended would prove safe under conditions which it was to serve. (Page 44).

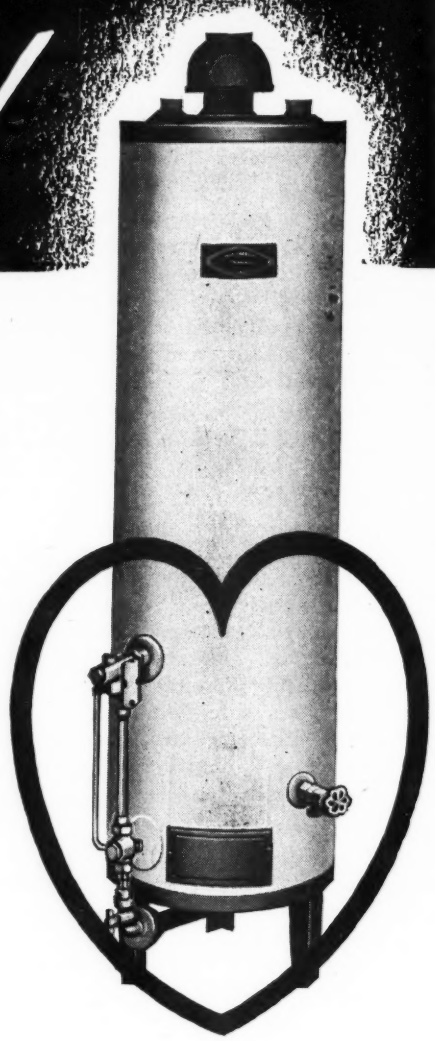
●

Another congressional inquiry which, if approved, will delve into natural gas matters, has been proposed by Senator Guffey (D., Pennsylvania). The resolution (S. Con. Res. 22) has been referred to the Senate Committee on Mines and Mining, of which the Pennsylvania Senator is chairman, and that Committee is witholding action on the measure pending a report from the Department of Interior as to its reaction to the proposal.

●

Wingfoot homes, Inc., Akron, Ohio is producing at Lichfied, Ariz. a small portable home to meet the needs of families who desire compact, flexible, and modern living quarters. The price of $2000 includes a gas range, automatic water heater, heating equipment, and an ice box (probably to be replaced later with an electric or gas refrigerator).

Let's get to the Heart of it!

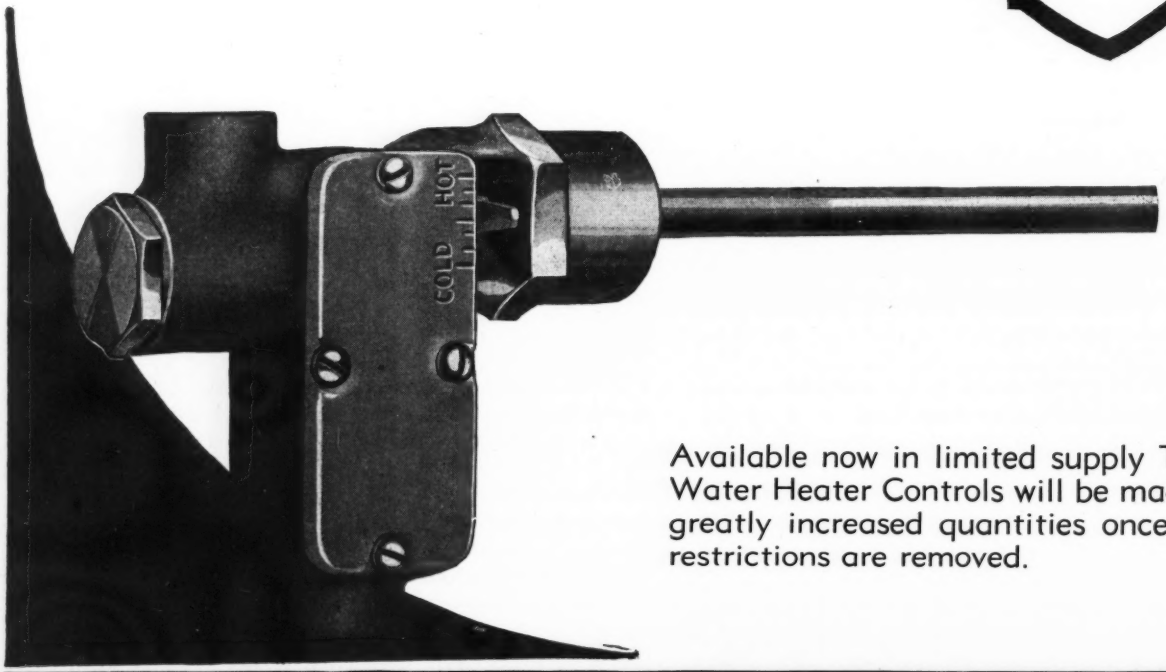


The Heart of a Dependable Automatic Hot Water Heater is the

TITAN
WATER HEATER CONTROLS

The demand for Automatic Hot Water Heaters—for both new and old homes—is going to keep all of us busy after V-J DAY.

Arrange now to have a sufficient supply of Titan Water Heater Controls for all of your customers.



Available now in limited supply Titan Water Heater Controls will be made in greatly increased quantities once war restrictions are removed.

THE TITAN VALVE & MANUFACTURING COMPANY

9913 ELK AVENUE • CLEVELAND 8, OHIO

War and Postwar Wage Controls in the

GAS AND OIL INDUSTRIES

BY THEODORE W. KHEEL

Executive Director, NWLB

EVER since the unconditional surrender of Germany, American industry and labor have been wondering to what extent wartime wage controls will be continued. This is just as true in the gas and petroleum industries as in any other. But to answer this question it is first necessary to look at what has happened to the wages *during* the war.

Under certain conditions the War Labor Board will approve wage increases; and often it has established wage rate "brackets" to determine approvable rates in local labor markets or specific industries.

For example, as a part of this program the Board early in 1944 established approvable rates for rig-builders in the petroleum industry in 27 states. In determining these rates up to which pay levels might be raised with WLB approval, the Board acted, as it always does, upon the recommendation of a tripartite panel which had studied the problems of wage rates for the workers. (A tripartite panel consists of representatives of labor, industry, and the public, so that fairness and impartiality is assured).

Prior to the establishment of uniform rates throughout the industry, differentials as high as 50c an hour for the same classification of work had existed between different areas. The new rates set up by the War Labor Board maintain the traditional differentials between the three classifications of rig builders but abolish the area differentials for similar work.

Thus the following approvable rates were established by WLB:

Rig-building foremen (crew pushers)	$2.75 per hour
Rig builder	2.50 per hour
Rig builder helper (apprentice)	1.50 per hour (starting rate)

These approvable rates are not automatic or mandatory but they require approval of the Regional War Labor Boards before being placed into effect.

In a case involving the Pan American Petroleum Corporation of Destrahan, La., the Dallas WLB ordered wage rates increased to exactly the approvable rates. This resulted in increases varying from 3c to 49c an hour, and averaging 17c an hour. The Corporation appealed this order to the National Board, which ruled on May 1, 1945, that it is within the discretion of a Regional Board to order wage increases up to the approvable area (bracket) rate regardless of the size of the resulting increase. In a majority opinion, Edwin E. Witte, public member, attributed the large average increase in rates to the fact that the "company rates had been very low for the industry," and stated that the "Regional Board, in its discretion, could have granted a lesser increase, but it did not contravene Board policy in granting increases to the minimum bracket rates."

The War Labor Board in October, 1942, was given the job of stabilizing the nation's wartime wages in addition to its task of settling wartime labor disputes for two reasons: (1) to help control prices and (2) to aid the movement of manpower into war production.

Unrestricted bidding by employers for scarce labor in wartime could have created a chaotic manpower situation. Employees themselves would be induced to go "job-shopping," switching from plant to plant in quest of higher pay. It is not difficult to imagine the effect of such a manpower situation upon an industrial machine striving for maximum war production.

Nor can prices be held in line if higher wages cause increased costs to such an extent that prices have to go up. Wage increases which push up production costs appreciably come home to roost with the wage earner in the form of higher prices. If further wage increases are requested, then the inflationary spiral is on its way.

V-E Day has not erased this threat of inflation. Fred M. Vinson, Director of War Mobilization and Reconversion, in his report of May 9, warned the American people that "Removal of wage controls at this time would be certain to increase the cost of producing goods. Producers would have to charge higher prices to cover their costs of production. This would cause the cost of living to go up. As the cost of living rose, wages would have to be raised again. Such a merry-go-round of wage and price increases not only would fail to help workers, but would be a sure way to bring on a collapse

TABLE 1. WAGE STABILIZATION RULES

1. Wage increases will be approved by WLB under the Little Steel Formula, which permits general wage increases to appropriate groups of workers up to 15% of the average straight-time hourly rates that prevailed on January 1, 1941. When in April 1942 the President decided that the general level of wages and prices should be held, the cost of living index had already risen 15% since January 1, 1941. About two-thirds of the workers in America had already had wage increases of more than 15% above their peacetime rates.

Therefore, the WLB in its Little Steel Formula said: "Those workers who were lagging most in the upswing of wages should be allowed to catch up with cost-of-living increases." Since today virtually all of the Little Steel increases have been given, the effect of the Formula is to impose a ceiling on general increases. In this way, WLB has held in check the general level of wages without imposing hardship on those whose wages had lagged behind the general upswing.

2. Increases to the minimum of "sound and tested" rates to correct inequities in rates for similar work in different plants are also approved by the WLB. This tuning up of obsolete wage machinery has been a major part of the Board's work In every community there are historical differences in the rates paid for similar work. Some of these differences are seasonable and normal variations which appear in the area wage rates even in wartime.

The WLB had to develop a procedure for determining what differences are abnormal in an area. To solve this problem it evolved the bracket system. Regional Boards were required to fix for each key occupation in each labor market a range of rates which would be considered sound and tested for that area. Extremely high or low rates were discarded as abnormal. The resulting range of rates was regarded as the bracket of "sound and tested" rates for an industry in a given labor market.

TABLE 2. THESE WAGE INCREASES MAY BE GRANTED WITHOUT WLB APPROVAL

1. Promotions to jobs with greater skill. An employee promoted to a job with greater responsibility may receive an increase up to the minimum of the range for the job, or 15% above what he was being paid, whichever is higher.

2. Individual increases for merit, seniority, and length of service within established rate ranges. If the employer does not have established rate ranges for his various job classifications, he may secure approval by application to the Board. The individual increases within the rate ranges cannot exceed 10c per straight-time hour or two-thirds of the range for any one employee during the year, and the total amount expended cannot exceed an average of 5c per straight-time hour for all employees in the establishment whose rates are under WLB jurisdiction.

3. Firms with 30 or fewer employees, even without such a schedule, may give individual raises without Board approval. However, the "five and ten" limitation prevails here also, so that increases to individuals must be limited to 10c an hour per year and the average increase must not exceed 5c an hour.

The new rate must not exceed the highest rate paid for the job classification between July 1, 1942, and July 1, 1943. In addition, the increases must not be a basis for increasing prices of the product manufactured and must not be contrary to any collective bargaining agreement.

4. Promotions to jobs of greater skill.

5. Rates under 50c an hour may be brought up to 50c.

6. Bonuses to employees going into the armed forces.

7. Increases made by employers of eight or fewer employees, except in certain specified industries, unless the employees are covered by a master bargaining agreement.

after the war. Both prices and wages must be stabilized as long as this danger exists."

That is the "why" of wage stabilization. As to the "how" of the picture, the War Labor Board set up the rules listed in Table 1 which meet the need for controls to stabilize the general level of wages and at the same time correct inequities among low wage workers:

Increases up to the minimum of the bracket were then allowed for the purpose of correcting wage rate inequities between and among plants.

Other Approved Increases

Other increases which may be approved by the WLB include:

1. Increases to correct substandards of living. Increases in minimum hourly wage rates up to 55c are allowed without WLB approval.

2. Increases to correct inequities in the wage structure of a single plant. These increases, however, must not be the basis for increased prices and must not appreciably increase the level of production costs in the case of Government contracts.

3. In rare and unusual cases the Board approves increases above the minimum of the bracket of sound and tested rates to meet the critical needs of war production.

4. The Board also approves certain other increases which do not affect basic wage rates. Thus, for example, the Board has generally approved one week's vacation after one year or more of service, and two weeks' after five years' service. Premium pay for night shifts may also be approved, if it is the industry and area practice.

Customarily, yearly bonuses may be given without Board approval if the amount is not greater than that given last year, or, where figured on a percentage basis, if the method of computation is not changed. Other types of bonus would have to receive Board approval, although recently the WLB announced that employers may grant year-end bonuses up to $25 to their employees without further approval.

Firms with established *incentive plans* may continue these plans. An established plan is one which was in effect prior to October 3, 1942. A new incentive plan, or a change in the established plan, would require Board approval.

Increases which may be granted without WLB approval are listed in Table 2.

Employees receiving more than $5000 a year or who are in supervisory capacities and not represented by a union do not come under the jurisdiction of the WLB. Increases to these employees require Treasury Department approval.

Increases to meet requirements of Federal laws when a firm has a Government contract are also not subject to WLB approval.

The Board has been studying these general overall wage policy questions, which will arise as a result of cutbacks in war production, a shortened work week, and other factors.

The first step in a conversion wage policy was taken by WLB in its statement of May 10, 1945, outlining procedure by which companies could revise their wage schedules where they are converting to civilian production. The statement permits fixing of new job rates without advance approval of the Board, as long as the general level of hourly wage rates remains the same as on war production. One provision is that the changes must not result in a request for price increases. If a union is bargaining representative for the plant, the new schedules must be negotiated by the company and the union. The schedules must be submitted to WLB for review but this may be done after they have been put into effect.

Copies of the statement can be obtained from WLB regional offices or the regional Wage and Hour Offices of the Department of Labor. Conditions in the policy must be met before a company starts to establish new schedules. Another provision, for example, provides that the wartime rate for a job shall carry over to civilian production where the job content is the same as in war work.

The emphasis is on collective bargaining to establish quickly the new wage schedules needed for conversion, to hasten civilian production to the fullest extent possible without impeding the war effort against Japan.

The WLB has the duty of stabilizing wages against decreases as well as increases by terms of the Stabilization Act and Executive Orders. As more manpower becomes available, the danger of a deflationary trend in wages must be averted, just as the Board has guarded against inflationary tendencies throughout the course of the war.

The question which was asked at the beginning of this article can be answered in this way: As long as there is an inflationary pressure there will be need of wage stabilization to protect all of us against a soaring cost of living. As the free flow of civilian goods is resumed and manpower problems are less acute, it will be possible to adopt new wage stabilization policies to meet the needs of the changed economic conditions.

Pittsburgh International To Open Sept. 1 in N. Y.

Col. W. F. Rockwell, president of Pittsburgh Equitable Meter Co., Pittsburgh, has announced the formation of the Pittsburgh International Corp., to be opened Sept. 1, 1945, with offices at 7701 Empire State Bldg., New York City. This firm will be under the direction of A. L. Di Giulian and will handle the export sale and distribution of products manufactured by Pittsburgh Equitable Meter Co.-Merco Nordstrom Valve Co., and subsidiaries.

CED Launches Broadcast

The Committee for Economic Development is launching a weekly sustaining radio series over the American Broadcasting Co. network, Saturday, August 11, from 7:00 to 7:15 p. m., E.W.T. The CED series will tell the two-pronged story of grass-roots planning by business, and independent research by scholars and businessmen on national economic problems.

THE WESTERN APPLIANCE MARKET

And the Manufacturers' Part in Selling It Postwar

By O. R. DOERR

President, Pacific Coast Gas Association

MOST gas men seem fairly well convinced that the backlog of pent-up demand will quite generally consume, in the first few postwar years, all or most of the products which our factories are capable of producing. However, our postwar business structure should not rest on such flimsy foundation. Even if it should develop that a seller's market is continued in the early postwar years, we should not fail to look at the more vital, long-range picture. Sooner or later manufacturers and merchandisers of gas appliances will come up against one of several kinds of competition:

1. Competition created by a war-developed psychology for newer, bigger, and better things.
2. Competition of the direct type with products using other fuels and energies.
3. Competition for a fair share of the purchaser's dollar.

The statements and conclusions which I am going to mention, by way of supporting this word of caution, are derived from the study of a recently completed "Gallup poll" type survey of customer buying intentions made in California. The area encompassed by this survey covered most of the counties of the State, and represents a cross-section of public postwar buying intentions or, in other words, the commodities which the people intend to buy when available.

Several volumes of statistics have been compiled from the answers to the 130 questions included in the questionnaire used in contacting the public. What I shall give are merely some general conclusions as to the public's intentions regarding the purchase of gas appliances, as revealed by these data.

1. The Consumers' Preference: The first sobering deduction is that the public does not now regard domestic gas appliances as the Cinderella of the home appliance market to be purchased at the very first opportunity for their dream homes of tomorrow. However, they are planning and scheming to get early possession in unprecedented volume of such convenience devices as:

1. The automatic washing machine
2. The radio,
3. The mechanical refrigerator
4. One or two smaller gadgets in the home appliance field.

They also are very anxious to own a new automobile, and their expressed desires for a new home, in units alone, is over twice that of gas ranges, regardless of the consideration of the expenditure of thousands rather than hundreds of dollars per unit.

2. Potential Sales Volume: Gas appliances do not rank amongst the top commodities—from a volume point of view—that the public has evidently set their minds on acquiring as soon as equipment is available. In example, the dollar volume of the expressed immediate demand for gas appliances is one of the lowest of the several groups of customer buying intentions represented (this is almost true as to unit demand, too). They fall in this order:

1. New Homes
2. Automobiles
3. Furniture
4. Electrical appliances
5. Gas appliances

However, this does not mean that the public is only passively interested in gas appliances. While fifth on the list, customer buying intentions during the first three postwar years, represents about 77 million dollars in retail dollar volume at 1941 prices.

3. First Postwar Year vs. 1941 Sales: Comparing gas appliance purchase intentions with sales during the year 1941, one does not obtain a very optimistic, or stimulating picture. In the main—buying intentions for the first year appliances will be considered available—are less than 1941 sales. Gas central furnaces are the one exception, with postwar buying plans being about three times the volume of 1941 sales.

Other principal gas appliances compare as follows:

First Postwar Year vs. 1941 Sales

Ranges	4/5ths
Water Heaters	3/4ths
Unit Heaters	1/3rd

Central furnaces are in demand for the obvious reason that they have been more difficult to obtain during the war period, and householders are dissatisfied with inadequate heat from make-shift installations. Also, the prevalent favorable economic situation causes people to plan for the more convenient and comfort-giving central plant.

Comparatively, the items most popular amongst the people's desires, such as automobiles, home furnishings, new homes, as well as certain electrical appliances—all forecast a market of from two to four times any prewar yearly volume.

The charts (Fig. 1 and 2) graphically illustrate customer buying intentions regarding gas appliances in California.

The factors covered comparatively are: (1) "Retail Dollar Volume"—by appliance types for first three postwar vear totals; (2) "Number of Units"—by appliance types for first three postwar year totals with first vear buving intentions separately illustrated.

Data shown for "mechanical refrigeration" and "laundry dryers" are combined gas and electric buying intention expressions of survey results. Mechanical refrigeration data showed about ten to one in favor of electric refrigeration, while 56% of those intending to buy a laundry dryer preferred the electric type.

There are many reasons that can be cited to account for this buying intention showing on gas appliances. In the first place, except for refrigerators, gas appliances have been available almost continuously during

O. R. Doerr

NUMEROUS SURVEYS throughout the country have pretty well established what the public thinks of gas and the gas industry. Generally speaking gas appliances are not in the top drawer of the public's immediate postwar desires. Nor do they rank with some other commodities — homes, autos, radios, etc. from a volume point of view. Furthermore, immediate buying intentions postwar as compared with 1941 sales are not always inclined to create optimism. The present article, concerned with the California market, bears out the points made above. However, as Mr. Doerr states in the discussion, there are many reasons for this buying intention showing on gas appliances—among them the fact that gas appliances have been available during the war, that glamour publicity for electronics, motor driven, and heat producing devices have stolen the show from gas. This negative public opinion can and must be corrected, and expert salesmanship, both written and spoken, is the proper prescription for cure. Mr. Doerr's remarks were presented before a luncheon meeting of the Domestic Gas Research Conference held in Los Angeles, in July.

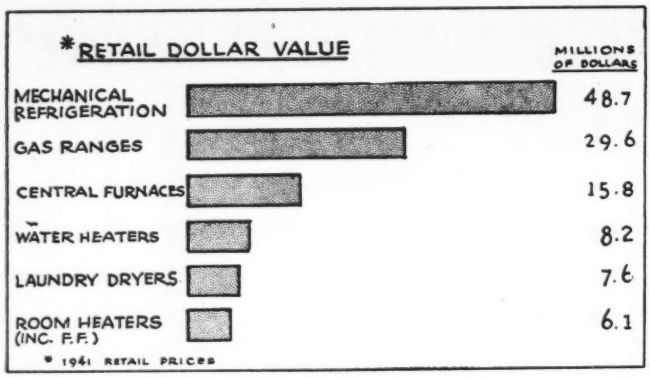


FIG. 1. Customer buying intentions in California—retail dollar volume.

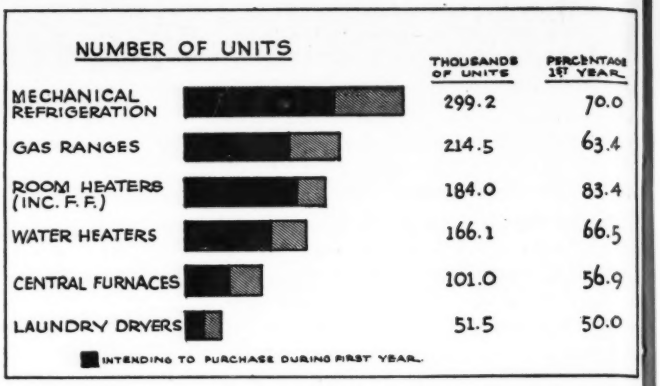


FIG. 2. Total appliances sales expectations for first three postwar years.

the war and anyone who really was determined to have a new range or water heater, or a unit of the smaller type of heating equipment, has been able to get it in one manner or another. This has meant that most of the urgent needs have not gone unfilled and that the pent-up demand would necessarily be considerably reduced, as compared to those devices which have been entirely off the market.

Then, again, there has been considerably less of the glamour publicity and promotion during the war years about gas utilization. Electronics, motor-driven and heat-producing devices and equipment used in war work have emphasized competition by extolling its miracles and wonders.

This thesis—somewhat negative in character—is not presented by way of discouragement. I simply want to point out that the things now being done in physical research, are *musts*.

We probably should accept the more pessimistic view of some of these facts in order to provide securely against them. One of the important goals is to insure that sufficient glamour and oomph is built into postwar gas appliances, and then—that the public is educated to realize it. We have always had superior performance and many other basic qualities which need re-emphasis too.

We should devote more attention to the human phase of our problem. We must know what our customers think about us and our products NOW. Has the war period twisted their opinion about our industry? What do they think about our competition?—and finally, what action, if any, is necessary to keep our commodities in the forefront?

We are all aware of the numerous changes which have taken place in the past four years in our customer picture. We know more change lies ahead. Do we know just what all this means in terms of public opinion and good will, acceptance of product and downright appraisal of gas fuel and equipment? I'm afraid we do not know enough about these important things at this moment. We *can* correct this.

Public opinion is a fleeting thing. It is created according to some very definite rules. It responds to education. Expert salesmanship, both written and spoken, is the proper prescription to correct negative public opinion. It requires action along lines of training and education, which many business men do not especially like. It must not be neglected.

Philadelphia Co.'s Merchandising Principles

THE Philadelphia Gas Works Co., in its July issue of its publication "Appliance Merchandiser," mailed to 500 Philadelphia appliance dealers, furniture stores, and department stores, announced the merchandising principles recently adopted by the company.

H. R. Zeamer, supervisor, dealer division, states them as follows:

1. Approved Types of Appliances

Gas appliances offered for sale shall be such as to assure safe, efficient, and dependable service. Gas appliances approved by the American Gas Association Testing Laboratories shall be deemed safe, efficient, and dependable.

2. Merchandise To Be Sold By Utility

The utility shall sell only gas-consuming appliances and the auxiliary equipment necessary for their complete installation and use.

3. Retail Price of Appliances

The established list price or a price that allows the customary mark-up shall be recognized as the proper maximum retail price of any appliance.

When the utility purchases an item with the intent of establishing a special price thereon, the utility shall provide that such item may be purchased by any merchandising outlets in the territory served by the utility from the merchandising outlet's supplier at its customary discount (applied to such special price), subject to the supplier's usual credit, franchise, sales, and other conditions applying to the regular sale of that item.

The foregoing is not intended to apply to shopworn, damaged, repossessed or reconditioned items, nor to articles previously purchased which have become obsolete.

4. Exclusive Sale of Any Appliance

The utility shall not accept the sale of any make or model of appliance to the exclusion of other dealers.

5. Selling Conditions

No premiums shall be given, nor trade-in allowance made by a utility in connection with the sale of any appliance, unless all retailers selling that same appliance are enabled to participate.

It is recognized that Regulation "W" governs the length of installment terms and down payments. Should Regulation "W" be rescinded, the length of installation terms, down payments, and carrying charges shall be economically sound and within the financing terms available to other dealers.

6. Selling Personnel

The activities of all appliance salesmen should be controlled so as to avoid misrepresentation and other unfair selling practices.

Total compensation of utility appliance salesmen shall, so far as possible, be competitive with that of compensation paid by retailers.

7. Advertising

Coordinated advertising should be developed by the Utility with other dealers with the view of making available to such dealers all reasonable cooperation in advertising, displays, and sales promotion.

8. Installation

If a utility contributes to the cost of piping facilities necessary for the installation of appliances sold by itself, it shall make identical contributions on similar appliances of approved quality sold by retailers in the same territory.

9. Servicing

In servicing an appliance beyond the warranty period, no distinction shall be made in the service rendered and in the policy of charging, regardless from whom the appliance was purchased.

THE MIDWEST PERSONNEL CONFERENCE

Its Purposes and Activities

C. C. JOLLEY

Personnel Director, Natural Gas Pipeline Co. of America, Chicago*

THE purposes and activities of the Midwest Personnel Conference can best be understood by first reviewing some of the incidents and circumstances leading up to the forming of this group.

Early in 1943, PAW appointed a committee to represent the natural gas and natural gasoline industry in the preparation of a list of job classifications which could be used by industry and Selective Service boards and other government agencies as a means to affect a better understanding. The results of this work were indeed gratifying, and the War Manpower Commission readily approved the list for their Region X. The job descriptions were printed in book form and released in June, 1943.

The urgent need for a similar list covering the distribution phase of the natural gas industry prompted M. V. Cousins, personnel director of the United Pipeline Co., at Shreveport, to call together a group of men representing several of the natural gas pipeline and distribution companies in Texas and Louisiana to extend this work. Several of these men had served on the PAW Committee and their experience was invaluable.

Job Descriptions

These job descriptions included the Titles, Functions and Responsibilities, Physical Requirements, Minimum Training, and Experience Requirements of the Job. The American Gas Association was contacted and readily approved the sponsorship of this work. The book was released in October, 1943, and distribution made through the American Gas Association.

Although the Selective Service problem had been the principal reason for calling this group together, it was soon apparent they had many mutual problems. It was the discussion of these mutual problems by a small group of men representing a few natural gas pipeline and distribution companies that prompted the organization of the Southwest Personnel Conference. The American Gas Association was asked to sponsor the organization and the idea met the approval of the A.G.A. Executive Board and a representative was present for the first organized meeting.

The group immediately became active in a very important issue which involved all natural gas transmission companies operating in Region VIII of the War Labor Board. That issue was the establishing of tested and going rates for the natural gas industry. This problem was of such concern that several special meetings were necessary before the material could be presented at a hearing before the War Labor Board Panel. The rates as submitted were approved by the Board in June, 1944, and established as the tested and going wage rates for the Natural Gas Transmission Industry.

It was during these meetings that several of the representatives of companies operating out of Texas further north became acquainted with the work of the Southwest Personnel Conference. Having experienced this association and realizing the value of the personal contact with men working on similar problems, a group of men representing pipeline companies operating in the midwest were called together in September, 1944, by R. B. Harkins, personnel director of Panhandle Eastern Pipeline Co. at Kansas City, Mo., to discuss the established rates approved by the VIII Regional War Labor Board and decide on some action to be taken regarding such rates in the VII Regional Board.

The same spirit of cooperation and mutual understanding prevailed at this meeting as had been experienced in the Southwest Conference, and a suggestion was made that some consideration be given to the organization of a personnel group for the midwestern states, comprising Kansas, Missouri, Iowa, Nebraska, and Arkansas.

The A.G.A. was approached and approval was granted. Invitations were extended to all gas companies in the midwest area to be represented at the first meeting held October 25, 1944, at Kansas City, Mo. R. B. Harkins, Personnel Director of Panhandle Eastern Pipeline Co., was elected chairman and the organization is known as the Midwest Personnel Conference of the American Gas Association.

Any gas company, whether natural or manufactured, engaged in the production, distribution or transmission phase of the industry is eligible; members or non-members of the A.G.A. makes no difference. Anybody in the gas business is more than welcome to attend these meetings.

Getting together in these conferences develops closer acquaintance among the companies, and the informal discussions of the representatives in attendance develop a more healthy relationship than can ever be accomplished in all your "Dear Sir" letters. Formal contacts serve their purposes, but they fail to afford the satisfaction derived from intimate discussion among close acquaintances.

War Brings Problems

The many problems facing gas companies today are the problems brought about by extreme wartime conditions. These are all urgent and have caused those responsible for personnel administration a great many headaches. For many companies, employment problems and administrative problems associated with personnel had been handled entirely within the particular department. Under normal conditions these arrangements were perhaps entirely satisfactory. However, the majority of new problems did not develop within any one organization nor within the industry. They developed through the administration of governmental laws and directives.

In the beginning, these problems were tossed around from one department to another, but it soon became apparent that somebody would have to be made responsible. Consequent-

*Excerpts from an address presented before the Fortieth Annual Meeting of the Mid-West Gas Association, Omaha, Neb.

ly Personnel Departments came into their own. For many companies it meant a new department, a new field, with much to be accomplished. Following are some of the problems faced by the group:

1. *Selective Service*, the first problem, was of no small concern. Manning tables, replacement schedules, 42-A Specials, and now 42-A (Special-Revised) all are implements of selective service used in the deferment of men for essential and critical industries. The proper application of these forms must be understood, and it behooves the individual responsible for personnel administration to keep abreast of the ever-changing problem.

2. *Company policies* must be revised to meet new conditions. Plans must be made for the post-war organization and the returning service man plays a very important part in this planning. The G.I. Bill of Rights must be understood and interpreted correctly.

3. *Returning servicemen*: Several companies have had considerable experience with returning servicemen, as well as the employment and utilization of disabled veterans. This experience is indeed valuable as much is to be learned by most of us.

4. *Labor unions*: The increased trend of unionization is another challenge. Labor unions are extremely well organized and their leaders are spending huge sums of money in research and publicity. Union officials confer often and long. They have obtained results. The demands made by unions should be carefully analyzed. These demands change in character and frequently take definite trends which deserve study. We should all be prepared to deal understandingly and intelligently with union issues.

5. *Manpower* is a present-day problem and is acute with most of us. Here we are faced with employment ceilings, 48-hour work week, U.S.E.S. referrals and many other regulations. Operating under these conditions we find ourselves faced with the employment of handicapped people, people of minority groups, women to fill men's jobs.

What is our employment contract under these conditions? What about our compensation laws? Physical examinations? Upgrading? Seniority rights? etc. These are only a few of the problems, confronting personnel men today. The foregoing are the type of problems that prompt us to seek help by appealing to each other. How are other companies meeting these issues? What are other industries doing about returning service men? We do not expect to have all our problems answered; nevertheless, the exchange of ideas and opinions is very helpful.

To assist in the discussion of major subjects we are attempting to secure first-hand information by inviting authoritative guest speakers to our meetings. In addition to providing guest speakers, the chairman (and members are encouraged to do likewise) secures the most recent papers or articles that have been presented on the many subjects concerning the group. These articles in the form of reprints or bulletins are made available and mailed to members not present. This material may be procured through Chairman Harkins.

Many subjects are viewed with sufficient importance to warrant further study and the gathering of additional information. Committees are appointed to carry on these investigations or studies and their report is presented at the following meeting. The most recent report presented was an outline discussion of "Job Analysis" and "Job Descriptions," a subject that is worthy of considerable study in any organization. Our conferences are held approximately every three months and are limited to one day. They are designed to function as a round table or clearing house for current and post-war problems confronting personnel management. There are many subjects that can come before a group of this nature. We hope for continuing interest.

Canadian Gas Investigation to Resume

SEPTEMBER is expected to bring a resumption of the inquiry being held in the Canadian city of Calgary into the various phases of Alberta's natural gas industry with emphasis on conservation. Sittings were held intermittently through March, April, May and June with a recess during July and August.

Under an order issued by the Natural Gas Utilities Board in June, gas conservation and repressuring in Turner Valley now are compulsory. Hitherto, certain conservation measures put into effect were undertaken at government order, others voluntarily. Their cost to date has run to approximately $1,000,000, with the final figure expected to reach possibly several times that amount.

Most of these expenditures have been borne by the three main gas collecting companies—Madison Natural Gas Co.. Ltd., British American Oil Co., Ltd., and Gas and Oil Products, Ltd. Under the June board order, Madison will return all excess gas to the producing formation and will issue monthly statements to the producers of gas. Payment will be made later when the board determines a rate from the information offered at the inquiry, which may not conclude for several months.

Among other matters up for consideration before the inquiry are: extent of gas reserves in Turner Valley, as well as elsewhere in the province; present and estimated future market demands; market sharing and pooling arrangements as to conserved and repressured gas; the fixing of rate bases for the public utilities involved and the allowance of a rate of return on rate bases so fixed; the method of computing depreciation and the rate thereof; allocation of the various costs involved, such as for gathering, delivering and scrubbing gas.

Possibly the most important and most interesting decision to be rendered by the board involves setting a price for gas. Alberta conservation authorities believe that it would be a precedent in North America to set a value on natural gas; that although gas has been valued before it has always been manufactured gas.

One of the main early witnesses was Dr. Donald L. Katz, professor of chemical engineering at the University of Michigan, who is representing the board. He estimated that at the present rate of consumption Turner Valley would continue to produce for 26.8 years. He expressed belief that the total wet gas reserves in the Valley as of Jan. 1, 1945, amounted to 406 billion cu. ft. Of this amount, he added, approximately 317 billion cu. ft. would be available for market.

Transmission Mains for Canadian Utility Authorized

The Union Gas Co. of Canada has received authorization from the Dawn Township Council, at a meeting held in Sarnia, Ontario, early in July, for the laying of mains for the transmission of gas both from Texas and from the Imperial Oil refinery in Sarnia. R. L. Bevan of Chatham, chief engineer of Union Gas, and J. A. McNevin, solicitor for the company, negotiated the authorization.

Natural Gas Investigation Hearings Begin Sept. 18

WITH the appointment in Chicago on July 19 of a steering committee and various subcommittees, the groups representing the gas and oil industries and the States have laid the groundwork for preparing their presentation during the Federal Power Commission's natural gas investigation scheduled for Kansas City, Sept. 18.

E. Buddrus, Panhandle Eastern Pipe Line Co.'s president, has been named chairman of the steering committee. Governor Kerr has appointed the Oklahoma Corporation Commission to represent that State before the hearings, while Governor Schoeppel of Kansas will represent the Interstate Oil Compact Commission.

E. Holley Poe and Associates as well as other consultants will serve the committees in coordinating material.

Steering Committee members are:

E. Buddrus, chairman, Panhandle Eastern Pipeline Co., Chicago; Richard Alden, Phillips Petroleum Co., Bartlesville, Okla.; Rex Baker, Humble Oil and Refining Co., Houston; B. R. Bay, Northern Natural Gas Co., Omaha; Walter Beckjord, Columbia Gas & Electric Co., New York; Joseph Bowes, Oklahoma Natural Gas Co., Tulsa.

Don Emory, Phillips Petroleum Co.,Bartlesville; John A. Ferguson, Independent Natural Gas Association of America, Washington, D. C.; R. H. Hargrove, United Gas Pipeline Co., Shreveport; D. D. Harrington, Hagy, Harrington & Marsh, Amarillo, Texas; R. W. Hendee, Colorado-Interstate Gas Co., Colorado Springs, Colo.; D. A. Hulcy, Lone Star Gas Co.

S. B. Ireland, Cities Service Gas Co., Oklahoma City; Paul Kayser, Gulf States Oil Company, Houston; F. S. Kelly, Arkansas Natural Gas Co., Shreveport; E. V. Kesinger, Natural Gas Pipeline Co.

N. C. McGowen, United Pipe Line Co., Shreveport; Wm. Moeller, Southern California Gas Co., Los Angeles; E. L. Rawlins, United Gas Pipeline Co., Shreveoprt; J. French Robinson, East Ohio Gas Co., Cleveland; Wm. H. Wildes, Republic Natural Gas Co., Dallas.

Chairmen of the subcommittees are:

Gas Reserves: W. H. Wildes.

State Commissions and Public Interest: D. A. Hulcy.

Interstate Natural Gas Pipeline Economics: E. V. Kesinger.

Natural Gas Utilization, End Use and Competitive Fuels: R. H. Hargrove.

Chemical Use of Natural Gas: Richard Alden.

Natural Gas Production and Gathering: E. L. Rawlins.

Texas Committees Formed

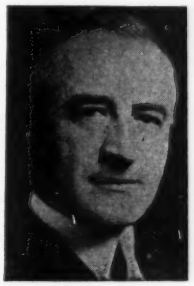
D. A. Hulcy, president of Lone Star Gas Co., Dr. E. DeGolyer, consulting geologist and engineer, and Charles I. Francis have been chosen to head three subcommittees which will present Texas' viewpoint on natural gas regulation before the FPC. The selection was

Hulcy will be chairman of the statistical committee, DeGolyer will head the engineering subcommittee, and Francis will be chairman of the legal staff.

Wolf to Succeed Forward as A. G. A. Director

H. CARL WOLF, president of Atlanta Gas Light Co., Atlanta, Ga., has been elected managing director of the American Gas Association, effective Oct. 1, 1945, according to an announcement by J. French Robinson, president. Wolf will succeed Alexander Forward, managing director since 1923, who is retiring from active business.

H. C. Wolf



Alexander Forward

Graduating from the University of Illinois with both his bachelors and masters degrees in electrical engineering, Wolf entered the utilities field as assistant engineer for the Illinois Commerce Commission and later became manager of the Edwardsville (Ill.) Water Co. He was a Captain in the United States Engineer Corps during World War I, serving 18 months in France as a combat engineer and with the American Peace Commission.

Wolf served as chief engineer of the Public Service Commission of Maryland from 1922 to 1929. He became assistant to the president of the Central Public Service Corp., was later elected vice president of Consolidated Electric and Gas Co., then president of Central Indiana Gas Co., and its affiliated companies.

In 1938 Wolf was elected president of the Atlanta Gas Light Co., and also served until recently as president of the Mobile Gas Service Corp. and Florida Public Utilities Co. He has been a director of the A.G.A. since 1941 and was appointed chairman of the Association's National Advertising Committee in 1942. He is a director of the First National Bank of Atlanta, past president of the Indiana Gas Association and the Southern Gas Association and past chairman of the Industrial and Commercial Gas Section of the A.G.A. Wolf is also serving as regional chairman of the CED for the Sixth Federal Reserve District.

As managing director of the Association, Wolf will play an important part in directing the vastly expanded program of research, sales promotion and advertising for which the gas industry and allied companies throughout the country have pledged more than $1,500,000 a year for the next three years.

Forward, who is retiring after 22 years as executive head of the Association, began his business career as a newspaper man. He was on the staff of leading newspapers and served as managing editor for dailies in Virginia. He was secretary to the Governor of Virginia from 1914 to 1918; attended military training camp at Plattsburgh in 1916 and was appointed president of the Virginia Division, Military Training Camps Association, charged with examination and recommendation to the War Department of candidates for officers in World War I.

He was appointed a member of the Virginia State Corporation Commission in February, 1918, but took leave of absence to become director of relief supplies to the Balkan States, with headquarters successively in Rome, Athens, Salonica and Bucharest. In appreciation for his meritorious work, Major Forward was decorated an officer of the Order of the Crown of Rumania.

Forward returned to his duties with the Virginia Commission in 1919 and served as State Fuel Administrator in 1922. He was re-elected to the Virginia Commission but resigned in 1923 to become managing director of the American Gas Association. During his 22 years of service, the annual budget of the Association has increased from $255,000 to $2,000,000 and it has become the national organization for the development and coordination of the five billion dollar gas industry.

A.G.A. To Meet October 24

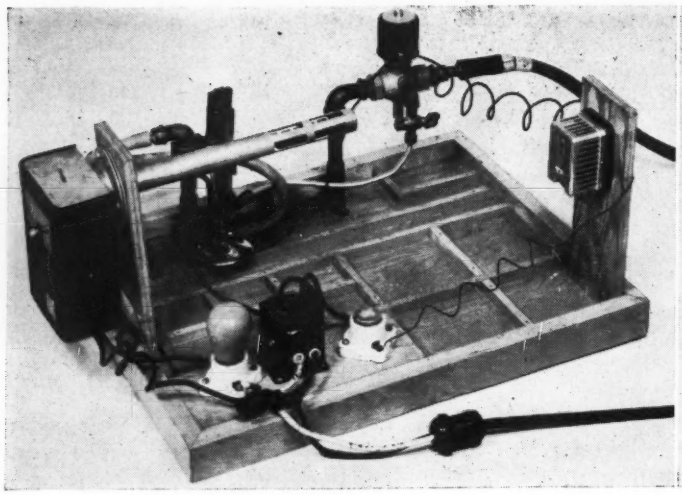
The Twenty Seventh Annual Meeting of the American Gas Association will be held on October 24, 1945 at the auditorium of the Engineering Societies Building, 29 West 39th Street, New York.

To impose a minimum burden on transportation and to obviate need for hotel accommodations, the Association will limit its convention to a 1-day meet.

Officers will be elected at the general membership meeting in the morning and committee chairmen will report on section activities during past fiscal year. The luncheon meeting and the remainder of the day will be devoted to organizational work by committees.

China to Use Schoch Process

China will be allowed to use the Schoch process developed at the University of Texas for conversion of natural gas into acetylene. China requested the use of the process for manufacture of needed war material.



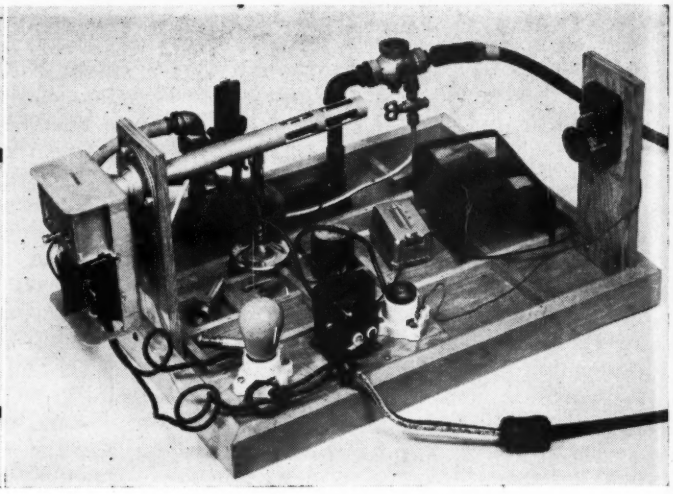


FIG. 1. (Left) Typical control arrangement for a forced air furnace. This set-up was made by a group of students. FIG. 2. (Right) The same control set-up shown in Fig. 1 after it had been torn apart and each separate control analyzed for its part in the functioning of the furnace.

School for Heating Equipment Servicemen

By L. M. HULL

President, Institute of Gas Heating Industries, Los Angeles, California

THE problem of proper installation and servicing of gas heating appliances is being met in the Los Angeles area through the conduct of a school for servicemen and installers sponsored by the Institute of Gas Heating Industries. This organization was formed several years ago for the stated purpose of improving installation and servicing conditions. The service school is only one of the activities which has been undertaken by the organization which have shown definite promise of concrete results.

It has been recognized that the best heating appliance possible to manufacture can not be relied upon to give satisfactory service unless the installation and maintenance are of the same quality as was built into the appliance by the manufacturer.

Cooperative Program

Previously, such educational programs have been conducted by individual companies with the result that the employees of smaller companies were often left with inadequate instruction or with no instruction at all. While the plan developed by the Institute of Gas Heating Industries does not intend to preclude all company instruction, it is intended to supplement company programs and, at the same time, raise the average level of performance to a higher degree.

The program is excellent evidence of what can be done with a cooperative plan entered into by competitive dealers and manufacturers, all striving to provide the customer with a more satisfactory heating job, thus insuring more business for the entire group by creating a host of satisfied customers.

Utility Participation

The entire course of instruction sponsored by the Institute was conducted by an educational committee composed of H. A. "Mike" Johnstone, Southern California Gas Co., chairman; Arthur Theobald, Payne Furnace Co., and Glenn Ashburn, Ashburn Brothers Heating, Inc.

The Southern California Gas Co. volunteered their services and facilities in the conduct of the classes, and it is doubtful the degree of success obtained could have been secured without the full cooperation of the company and of its employees. This is particularly true with respect to Johnstone who, with the assistance of Robert McKee, undertook the responsibility of preparing all subject matter, equipment and the formulation of some 300 questions which were asked of the students in quizzes each week. This entire program entailed the mimeographing of a great deal of material and the maintenance of records attendant to any series of classes where records and grades must be kept.

Since these classes were held at night, the students accepted the work as an extra-curricular activity. Classes were held in the Hollywood auditorium of the Southern California Gas Co. one night a week for nine weeks. Each manufacturer or dealer was responsible for the attendance of his installers. Although the classes and equipment were set up to accommodate a maximum of 36 students, the interest in the classes was evidenced by the fact that 49 students enrolled at the first class. No other registrations were accepted and 49 students completed the course, each having attended not less than seven out of nine classes and each having attained a passing grade of 75%. This excellence of performance and sustained interest is evidence of the fine quality of instruction which was provided by the committee and its staff of instructors.

Outline of Course

The course included instruction in fundamentals of gas combustion, venting of gas heating equipment, electricity as it pertains to controls and furnace operation, safety pilots, push button controls, automatic controls

*Mr. Hull is sales manager of Hammel Radiator and Engineering Co., Los Angeles.

for forced air furnaces, wiring of controls, thermocouples and an extended and detailed discussion of the Los Angeles warm air heating ordinance. Actual demonstrations, models and slides were used wherever possible to more clearly illustrate the principles involved.

In one of the classes, the students mounted controls and burners on a specially prepared board (see Fig. 1). After the set-ups were examined by the instructors, the students were given typical field problems which could be reproduced on the board. Each condition was analyzed and discussed thoroughly and an examination was made by the instructor to see that they were properly reassembled. Each group of students then took it upon themselves to misadjust the controls and purposely wire them so that improper results would be obtained. The boards were then transferred to another group who attempted to correct the maladjustments and their work was again checked by the instructors. Similar practical demonstrations were given for all other subjects reviewed by the classes.

Each student was given a mimeographed copy of the Los Angeles City Heating Ordinance and an entire period was devoted to an analysis of each clause in the ordinance together with a discussion for the reasons for ordinance provisions.

To acquaint the students with the problems of sizing and heat distribution in typical homes, floor plans were distributed and students were asked to recommend furnace sizes, furnace locations and heat duct systems for both forced air and gravity furnaces. Discussions were had on the proper ways of balancing heat distribution.

Certificates Awarded

At the conclusion of the course it was found that all 49 students had satisfactorily completed the course with an average grade of 85%. So pleased was the Educational Committee of the Institute of Gas Heating Industries, that certificates of attendance (Fig. 2) were prepared and signed by L. M. Hull, president, and C. A. Gabriel, secretary. These certificates were presented to the students at a regular meeting of the Institute of Gas Heating Industries to which the students had been invited.

This course of instruction is the latest of a series of activities which have been undertaken by the Institute, all with the stated purpose of improving gas heating appliance installations and maintenance.

INSTITUTE OF GAS HEATING INDUSTRIES

INSTALLERS' AND SERVICEMEN'S SCHOOL

be it known that

_____

having satisfactorily completed the following subjects is awarded this

Certificate of Attendance

Subjects Completed

Combustion, venting, fundamentals of electricity, safety pilots, push button controls, wiring push button controls, forced air furnace controls, wiring forced air furnace controls, thermocouple operated controls, L. A. Warm Air Heating Ordinance.

Given at Los Angeles, California, this _____ day of

_____, one thousand nine hundred and _____.

Recorded: _____ *President* _____ *Secretary*

FIG. 2. Certificate of Attendance presented to students of the Installers and Servicemen's School.

Sizing Chart

In 1942, a sizing chart was developed for the use of salesmen in estimating the heat loss from a home. This heating survey pad has demonstrated its worth to dealers since, through its use, the salesman is more completely able to demonstrate his knowledge of heating requirements. This heat loss calculation is based on the heat loss formulae developed by the American Society of Heating and Ventilating and published in the *Guide*. Short cuts have been taken advantage of to such an extent that the entire calculation for an average house can be made in a matter of minutes.

The Institute has also been active in sponsoring a registration ordinance in the City of Los Angeles whereby all heating contractors and journeymen installers are required to obtain a license. This license is issued only to those who can prove their ability and knowledge of gas heating problems by satisfactorily completing an examination based on the Los Angeles City Heating Ordinance.

A revised heating ordinance has been prepared through the efforts of the Institute based on practical conditions existing in Southern California.

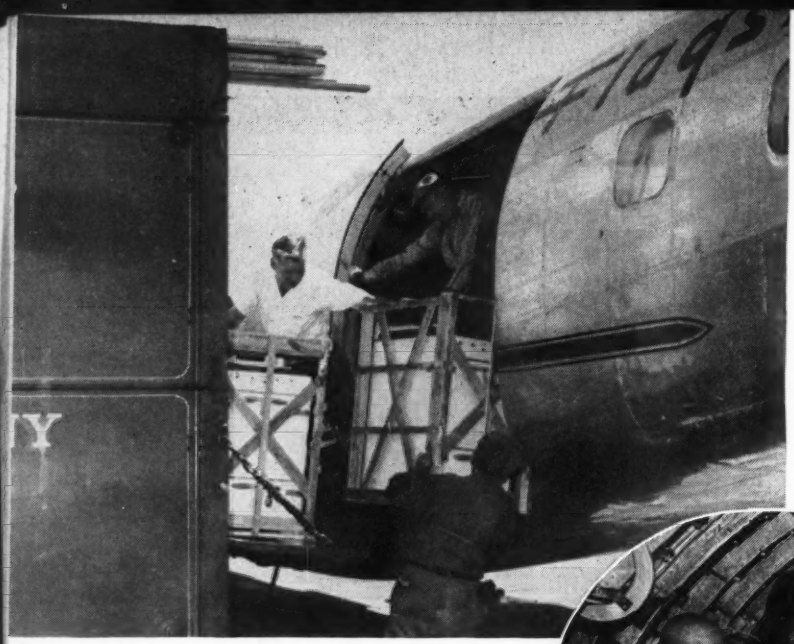
At present, a program is under way to cooperate with merchandisers in other fields, who are interested in selling and installing heating equipment. It seems inevitable that these merchandisers will eventually enter the heating field. The Institute has, therefore, taken the attitude that if they are to install heating equipment, they should be encouraged to make their installations in such a manner that the safety and comfort of the public is insured. To this end it is planned that additional courses of instruction similar to that described above will be organized in the near future for plumbers.

H. A. Johnstone

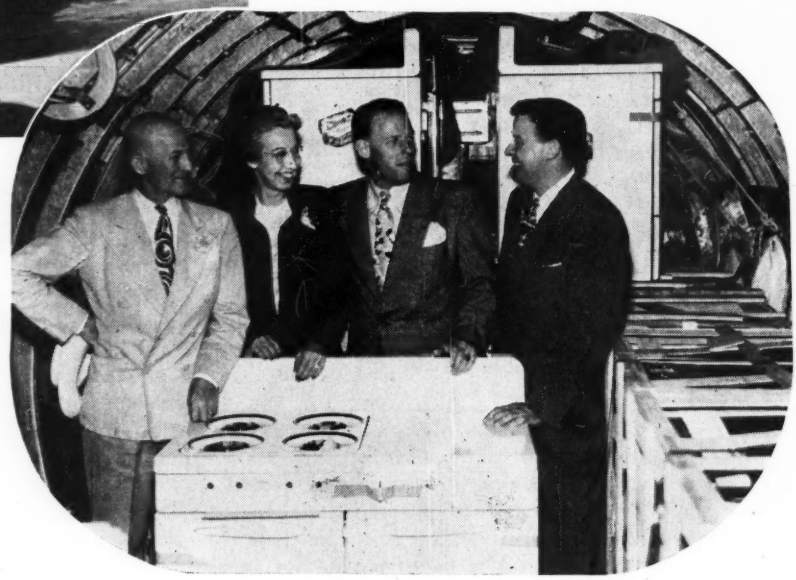
THE INSTITUTE OF GAS HEATING Industries in Los Angeles has taken a forward step in enlisting the cooperation of competitive dealers and manufacturers in the formation of a school at which merchandisers of heating equipment might learn proper methods of installation and servicing. The course of instruction was conducted by an educational committee composed of H. A. "Mike" Johnstone, chairman, Southern California Gas Co.; Arthur Theobald, Payne Furnace Co.; and Glenn Ashburn, Ashburn Brothers Heating, Inc. With the cooperation of the local utilities the first class was set up to accommodate 36 students. Forty-nine responded and that number was graduated with each man having attended not less than 7 out of 9 classes. The school is just one of the activities of the Institute, another valuable contribution being the development of a sizing chart for use by salesmen in estimating the heat loss from a home.

GAS RANGES FLY WEST

Cribben & Sexton Sends First Full Plane Load to Los Angeles



The Ranges Arrive. Inside the plane are Southern Counties Gas Co.'s Commercial Manager Cylde H. Potter, Home Service Director Katherine Rathbone, Special Representative A. R. Combs, Lloyd L. Langworthy, Los Angeles Manager of Cribben & Sexton. Note that some ranges were not crated.



Cribben & Sexton Gas Ranges Take To Air. Handlers load 55 ranges weighing 9 tons into an American Air Lines freighter in Chicago.

CRIBBEN & SEXTON CO., manufacturers of the Universal gas range, on July 11 made aviation history when they shipped a cargo of 55 gas ranges, weighing more than nine tons, by American Air Lines air freighter from their Chicago factory to their dealers in Los Angeles.

Many records were established in the 2000-mile flight which took only 10½ hours.

(1) It was the largest cargo of durable goods ever to be flown across country.

(2) First full load of gas ranges ever to go by air.

(3) First heavy shipment ever made in the largest freight plane ever built.

(4) First full load of appliances to be delivered in California the same day they were manufactured.

(5) First air freight shipment by contract carrier.

The plane is a C-39 Consolidated Vultee, four motored, with 8400 hp. The fuselage is 90 ft. long, the wingspread 110 ft., and the cargo hold rises 29 ft. above the landing wheels. The ship is now undergoing a three-month test by American Airlines Airfreight Service to determine the feasibility of regular service from coast to coast. It is planned to carry on the test with other types of cargo during the three-month period. The C-39 is three and a half times as large as any other plane ever built for this purpose.

The air shipment was packed in the plane in a novel manner. On the bottom of the cargo hold a layer of

First Range Comes Off the Plane. From left to right Southern California Gas Co.'s Manager of General Sales W. M. Jacobs, Mr. Langworthy, Southern California Gas Co. Vice President F. M. Banks and General Supervisor of Sales George Merkle.

The Range Is Put Into Service. Messrs. Jacobs, Banks, Potter and Langworthy enjoy biscuits prepared by Esther Day of Southern California Gas Co.'s Home Service Department. The range went into action 20 minutes after arrival.

30 crated ranges was bolted to the floor. Atop the crates and bolted to them was another full layer of 25 uncrated ranges. Although enroute the ship ran into two severe storms which the crew reported "gave the ship a terrific beating," it was found on landing that not a single range had been damaged.

Commenting on the shipment, John E. Bogan, Cribben & Sexton general sales manager, stated that this shipment was made as a test of the feasibility of such flights. Bogan foresaw air transportation of durable goods as commonplace and anticipated that overall cost in the future will compare with other methods of shipping. He further stated that "people want the merchandise and if we can get it to them faster with this service we will use it whenever it becomes reasonable and possible."

Charles Kimball, sales promotion manager for the range manufacturer, stressed the safety factor of the shipment, stating that complete coverage on this shipment was for the minimum premium $10, or less than 20c per range.

A large delegation of Midwest businessmen saw the flight take off, and the shipment was welcomed at Los Angeles with a celebration for more than 100 prominent persons, which culminated in a dinner at the Airlines Skyroom. This dinner was cooked on one of the ranges in the shipment which was unloaded and placed in operation within 20 minutes after the plane's arrival.

Cribben & Sexton is now devoting about 100% of its production to ranges. However, President and Chairman George D. Wilkinson anticipated that before V-J Day, based on present trends, war orders would be only 10% of all plant production.

Mystery Chef Resumes Broadcast for Gas

The Mystery Chef, who broadcast for gas companies from coast to coast during the years 1935 to 1938, and who has since been broadcasting over the blue network, has resigned from that network so that his broadcasts are now available over independent stations or affiliates of any of the networks.

Many gas companies are availing themselves of the opportunity to sponsor this unique series of broadcasts, which may now be more closely tied in with each local company than was the case previously.

Inquiries should be addressed to the Mystery Chef at his home, 14 E. 75th St., New York 21, N. Y.

The Western Stove Co., manufacturers of the Western Holly Gas Ranges, are currently sponsoring a new series of broadcasts by the Mystery Chef, by transcription over the Mutual network stations in Los Angeles and San Francisco.

Standardized Dimensions of Equipment For the

NEW FREEDOM GAS KITCHEN

A NATION-WIDE project to effect standardized dimensions of equipment for the New Freedom Gas Kitchen postwar, is being sponsored by the gas industry.

Formerly, according to H. Vinton Potter, director of A.G.A.'s coordinated Gas Kitchen Program, there had been little dimensional coordination in the equipment of various suppliers, and the assembling of the units for a finished kitchen presented many difficulties in the way of securing smooth streamlining.

To eliminate these difficulties and to simplify the planning and building of better kitchens in new homes or old, the American Gas Association secured the interest of the steel and wood cabinet industry and of gas appliance manufacturers in working out unification of dimensions so that cabinets and cabinet-sinks might be built in sizes to fit smoothly with gas ranges and refrigerators in practically all kitchens. By virtue of the measurements agreed upon each unit can be placed in relation to its most convenient use to obtain good functional kitchen design. The measurements are listed in Table 1.

In the case of deluxe gas ranges in which a slightly greater depth than the 24¾ in. depth of base cabinets is preferable to provide a larger cooking surface and a deeper oven and independent broiler, the manufacturers of these ranges will curve the range front from the sides to eliminate abrupt protrusion from the edges of the cabinets and thus continue the streamline.

The added interest of related industries—glass, linoleum, paint, plastics—covers remaining factors for the kitchen composed of equipment which matches in line and color.

Many local gas utilities plan to set up a kitchen planning service to assist their customers in acquiring the

TABLE 1. STANDARDIZED MEASUREMENTS FOR KITCHEN CABINET AND CABINET-SINK DESIGN

	Inches		Inches
Depth of counter top	25¼	Height of back rail	4
Depth of base cabinets	24¾	Thickness of back rail and counter top	1½
Height of base cabinets	36	Widths of base and top cabinets (in multiples of 3)	12, 15, 18 up to 39
Depth of toe cove	3		
Height of toe cove	4		

Explanation of Standardized Measurements

(based on the needs of the woman of average stature and size.)

Depth of counter top. The 25¼ in. was agreed upon because it would accommodate most standard sinks and the depth of the automatic dishwasher, permitting it to fit flush with the counter edge.

Depth of base cabinets. The 24¾ in. permit a ½-in. overhang of counter top so that possible spills will not streak down the front of base cabinets.

Height of base cabinets. The 36-in. height of base cabinets and counter top (or working surface) in a kitchen was arrived at after considerable research many years ago as standard for the woman of average stature, permitting correct posture and eliminating bending. This height is considered best in view of the fact that the bottom of the sink must be high enough to prevent strain on back and shoulder muscles when one is dishwashing.

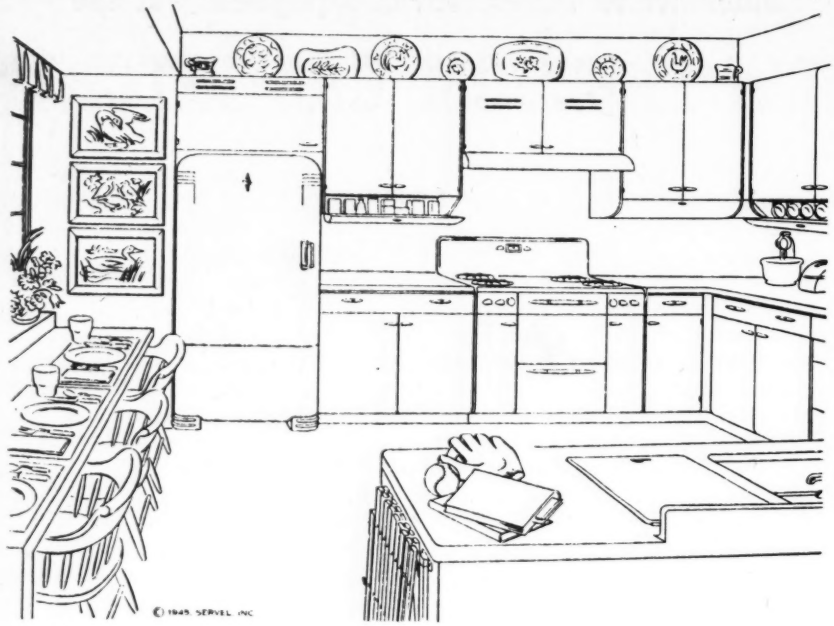
Depth of toe cove. After many studies by manufacturers of cabinets and ranges, a toe cove seemed most important and the 3-in. depth is generally used, with little variance. This permits standing at work before cabinets and range without bending or stubbing the toe, and also gives knee room. To eliminate toe-stubbing while cooking, the danger of spills is avoided, so this 3-in. depth is also a safety factor.

Height of toe cove. The 4-in. height is practical because lower shelves of cabinets are usually above that distance from the floor. This much height above the floor allows ample room for a broom or brush to be used, and from an architectural standpoint, it is considered to give a better line to the kitchen.

Height of back rail. The 4-in. height has been generally used by manufacturers and was accepted as a standard, although 6 and 8 in. can be, and sometimes will be used, in which case the back rail will be custom designed. However, the back rail may be omitted if desired.

Thickness of back rail. The 1½-in. thickness was agreed upon because it was the most generally used by the cabinet manufacturers.

Widths of cabinets. Because kitchens vary in dimensions, cabinets in varying widths are available in multiples of three inches.



Servel Designs New Freedom Gas Kitchen

THE three basic appliances for a kitchen are a range, a refrigerator, and a sink. But to make these into the New Freedom Gas Kitchen they must be integrated with the proper cabinets and accesories to form a working unit that will be acceptable to the American housewife. This combination will be offered in the New Freedom Gas Kitchen designed by Servel, Inc., Evansville, Indiana, it has been announced by Geo. S. Jones, Jr., Servel's vice president in charge of sales.

This new addition to the line of products offered the gas industry by Servel will, with the exception of the "CP" gas range, offer a kitchen from a single source of supply complete with all component parts in integrated design including refrigerator, cabinets, sinks, and accessories.

A complete program of local promotion will also come along with the new kitchen design. This program will include a campaign portfolio which will be produced as soon as possible.

In addition a training program will be provided which will cover sales, application planning, and installation and service to help gas companies promote the new kitchen. Another feature will be a series of display kitchens, and fixtures for setting up Kitchen Planning Centers in gas company salesrooms.

N. E. Wooters has been appointed as product sales manager of Kitchen Accessories. Mr. Wooters, who formerly was in charge of the company's Multiple Housing Division, has had long experience in apartment house sales, government housing programs, and contacts with the building trades.

The Kitchen Accessories Division of Servel, Inc., will be operated similar to other production divisions of the company. It will handle the distribution of cabinets, sinks, and accessories in relation to the new Servel Gas Kitchen.

Servel, according to company officials, is not disposed to enter into major competition with any of the companies manufacturing lines of kitchen cabinets. The company's only interest is in its own concept of the New Freedom Gas Kitchen as a revitalizing factor in the promotional program which has been carried on by the American Gas Association.

best and most attractive kitchen each can afford. That may mean a kitchen equipped with every device from an automatic range to automatic dishwasher. Or it may mean a kitchen planned for the add-a-piece method of purchase, to be completed over a period of years.

Standard dimensions of kitchen equipment will simplify and reduce to a minimum the bewildering aspects of kitchen planning and will provide an important service to the local dealer, department store, and furniture store handling equipment; also the gas utility, the homemaker or homeowner, as well as the architect and builder.

Since the FHA in most states will allow the inclusion of cabinets and appliances for the entire kitchen in the original mortgage, the majority of new homes will likely be complete, even to the finished kitchen.

Standardized dimensions in cabinets and appliances will not preclude any of the distinguishing features which have marked the products of various manufacturers in the past. For example, although the height of counter tops has been set at 36 in., there will be several individual ways of providing a lower working surface for the needs of a woman of less than average stature. One cabinet manufacturer may provide a short counter surface that will drop down 4 to 6 in. between two adjacent base cabinets. If the area beneath this short counter is left open and furnished with a chair, it becomes a desk, or a place where some work may be done seated. Another manufacturer may have some cabinets with a pull-out shelf 4 to 6 in. beneath the regular top — convenient for a meat grinder.

A few base cabinets may be of the 32-in. height to use in one section of a kitchen for a lower work area apart from the usual 36-in. height cabinets. The simplest solution may be a roll-about table 32 in. high which can be used for food preparation at any point in the room.

Standardized equipment can be utilized to assemble the three basic work centers in any of the prevailing workable kitchen arrangements—the straight line, the L-shaped, the corridor type and the U-shaped.

Planning Service

A dining feature is certain to be included in the average kitchen, whether it is only a breakfast bar, a nook, an alcove, or a small room off the kitchen. Planning services will offer suggestions for the many details which add up to charm—color scheme, floor coverings, bright counter surfaces, picture windows, curtains, plants and flowers to transform cold efficiency into the colorful, homey type of workroom many homemakers prefer.

Proper ventilation will be important in the postwar kitchen for several reasons: homes will be smaller; a trend toward warm air heating will increase, with its resultant recirculation of air from room to room; better insulation will offer less natural infiltration of air—with cooking odors having a disposition to linger longer; and with pastel colors in draperies and furnishings predominating, a cleaner atmosphere than that to which we have been accustomed will be a requisite.

The gas industry has several experimental ventilating installations in use and at the American Gas Association Testing Laboratories, Cleveland, Ohio, fundamental research in kitchen ventilation is making it possible for manufacturers to produce the kind of equpiment needed. Eventually several types of ventilating systems will be in use.

TRAINING PROGRAM
for Gas Appliance Servicemen

No. 2. Orientation

By C. C. WESTMORELAND

A GREAT DEAL has been written and said about the value of proper orientation or indoctrination of new employees. Often those programs are justified on the basis that they help "sell the Company" to the new employee and acquaint the new worker with his job and fellow employees. Such programs are justifiable on this basis because they are without a doubt valuable in that they accelerate the new employees progress in becoming proficient in his job duties.

The need for a broad knowledge of Company activities is even more important in the case of service employees. The appliance serviceman, while working on the customers' premises, is thrown into contact with the customer for relatively long periods of time. It is not at all unusual for the conversation to drift to subjects other than appliance construction or operations.

The American public is naturally curious as evidenced by sidewalk engineers at construction jobs, and part of that curiosity is directed at our business. The general public apprehension of gas and our large gas holders prompt questions relating to gas production, storage or transmission. The questions may sound absurd and completely unrelated to the serviceman's job, but the public has never fully accepted the functional organization of large companies and expects to have such questions answered intelligently. If the workman is unable to answer the questions and honestly admits it, the customer is likely to lose confidence in his work because "he doesn't know his business," and the over-all effectiveness of the call has been greatly reduced.

It would, of course, be impractical to attempt to familiarize the new employee with all of the details of each operation, but the major departmental functions should be covered sufficiently for the new employee to understand his position in the organization and to know when to refer questions to other departments. For these reasons, orientation training for service employees should be considered as part of the essential instruction to prepare the student for his duties.

Many employees of utilities are attracted by the relative stability of such companies. Many of the people currently being hired by utilities are actually taking wage cuts in order to associate themselves with an established business concern. Even during normal times, the average person hired is concerned with the stability of his new employer. Those people are interested in the age of the company, it's growth and present size.

The Gas Industry is relatively old in most localities so that there is usually abundant material pertaining to Company history. A mere recitation of statistics and dates will not be effective, but if the major milestones in the growth of the Company are related to the colorful events in

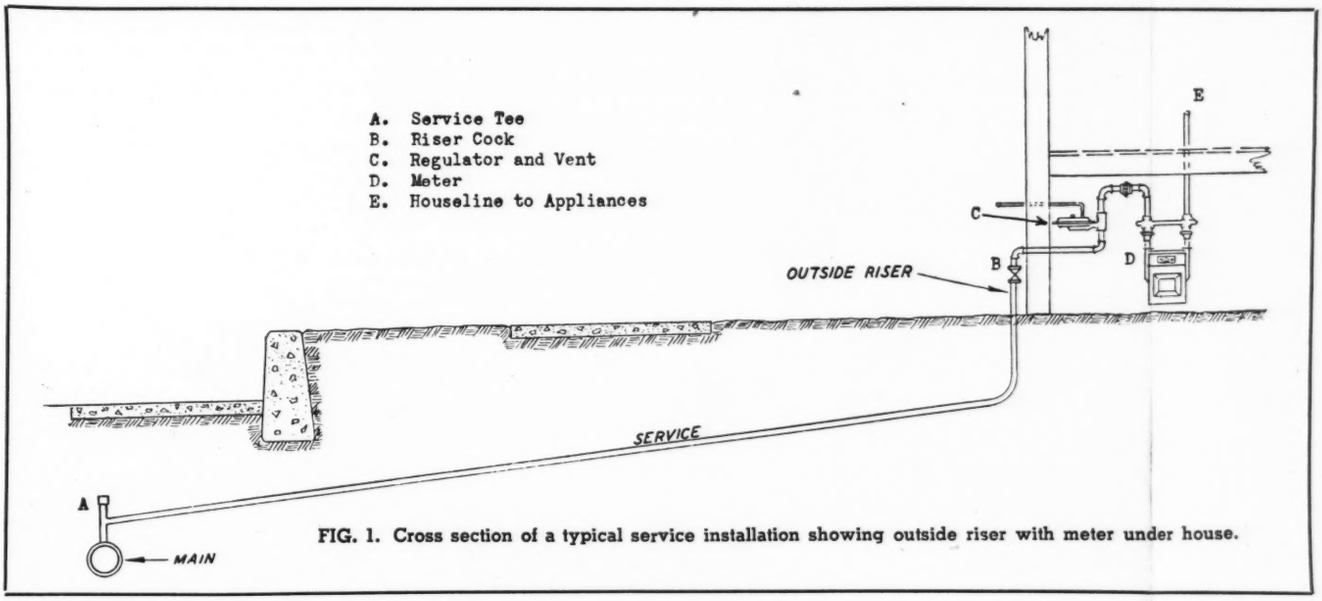
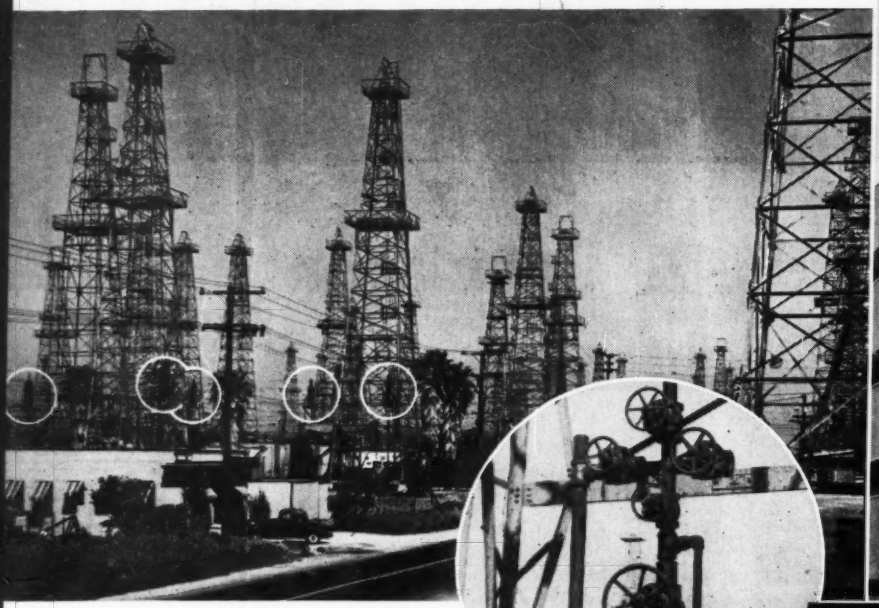
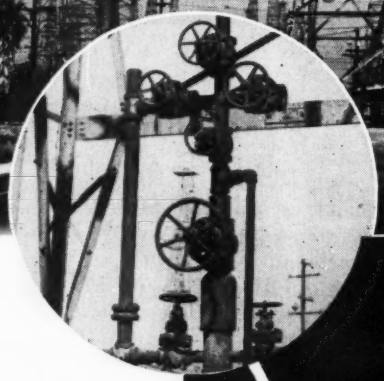


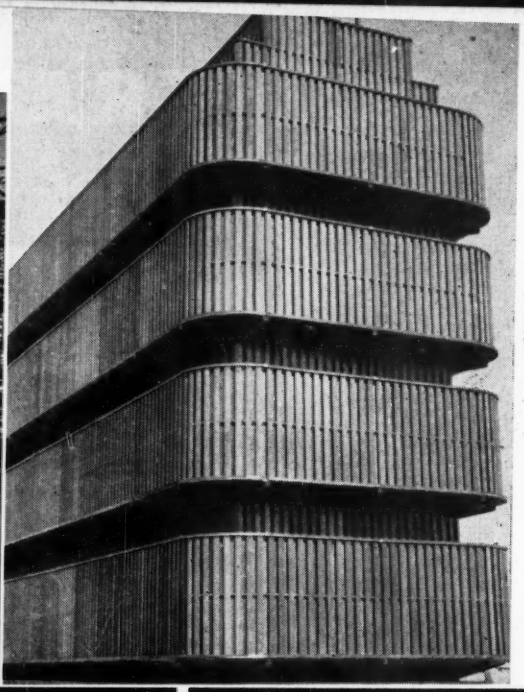
FIG. 1. Cross section of a typical service installation showing outside riser with meter under house.





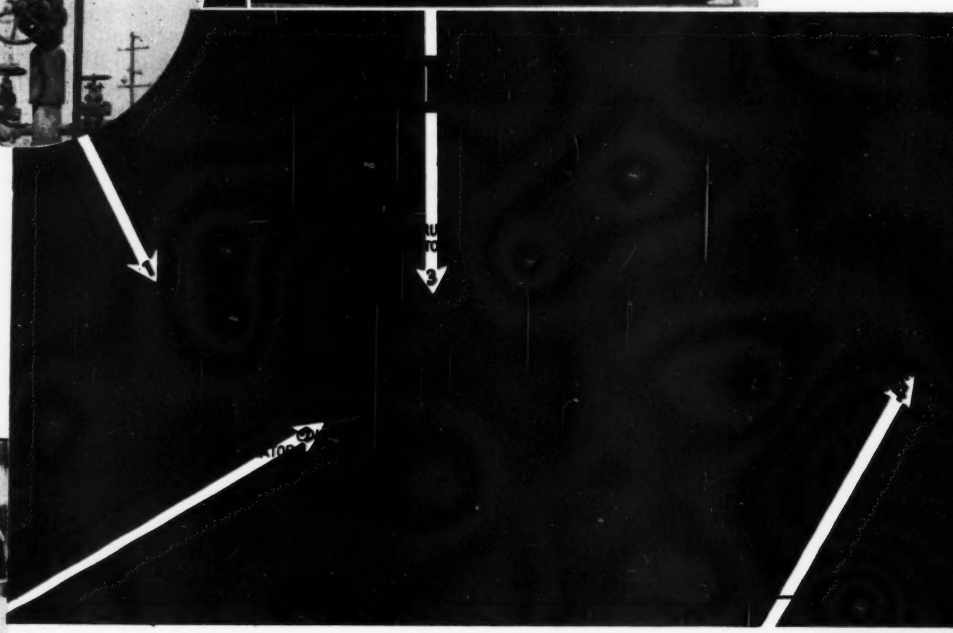
THE GAS WELL

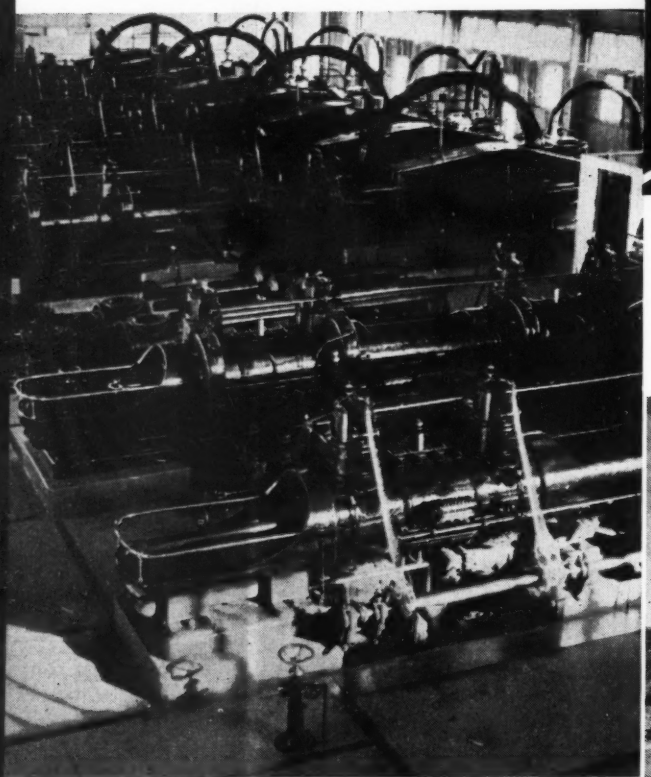
Oil, gas, water and other substances are usually produced simultaneously, although some fields, such as the great Hugoton field in the midwest, produce only "dry" gas. The Christmas tree (inset) is a valve set-up on flowing wells where gas pressure raises gas and liquid petroleum to the surface. It controls the flow to oil-gas separators (circles).



COOLIN TOWER

The "wet" gas, under compres is cooled in cooling tower b going to the sorption plant v liquids are rem



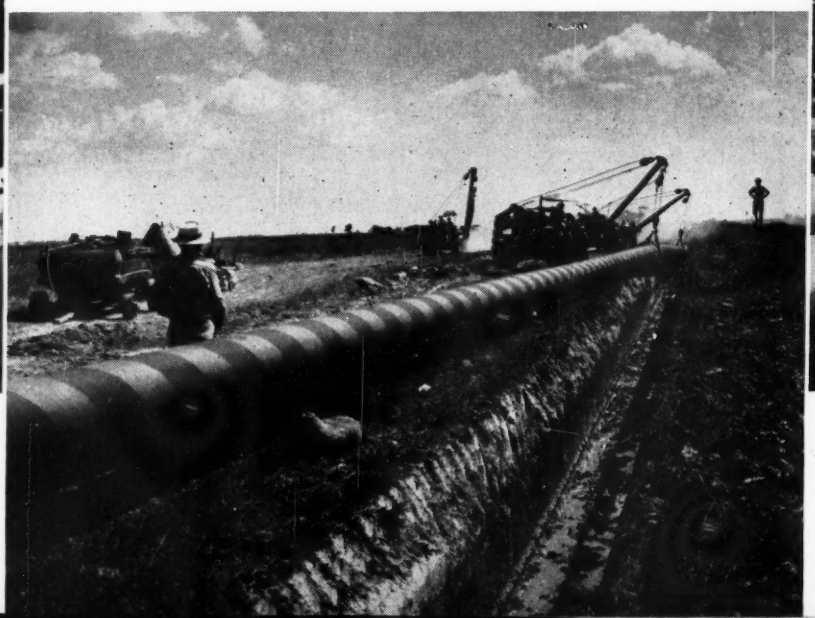


COMPRESSOR PLANT

After separation, "wet" gas is collected in the field through gathering lines, taken to the compressor plant prior to processing for removal of liquids.

PIPELINE

"Dry" gas leaving the absorption plant, is then further compressed and sent to market through transmission pipelines. Below is a typical construction scene showing a line being lowered into the trench.

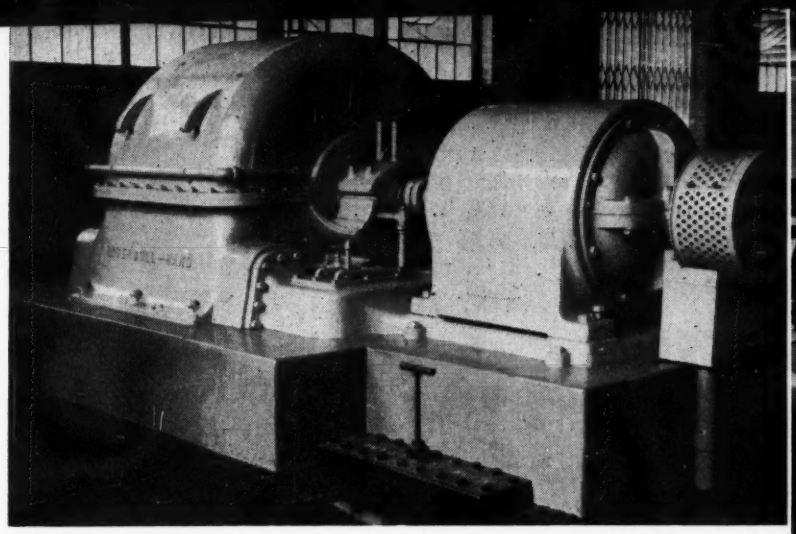


ODO

Here th gas, so

...OLING ...VER

...vet" gas, now ...compression, ...oled in the ...tower before ...to the ab- ...n plant where ...are removed.

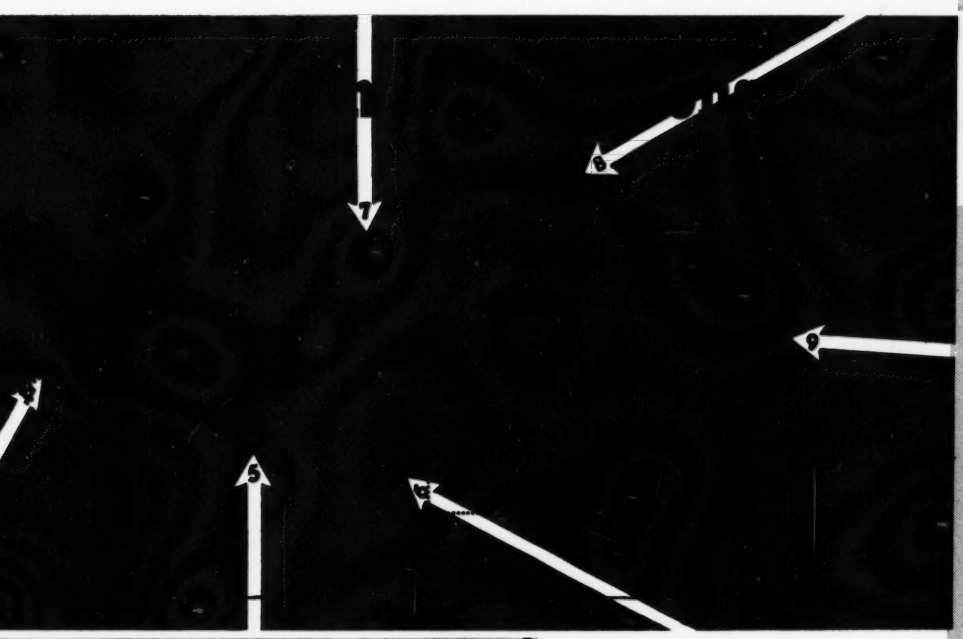


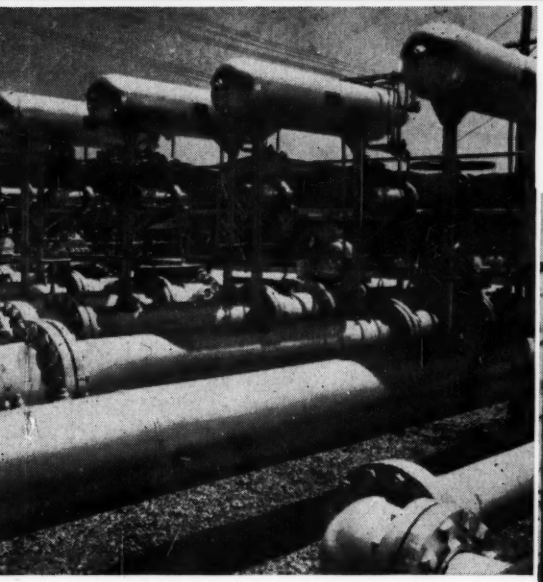
RECEIVING and COMPRESSING STATION

From here the gas is either sent into the distribution system or is stored in one of several types of holders, awaiting peak demand. Shown is a turbo-blower compressor used to draw gas from storage for low pressure distribution systems.

GAUGE BOX

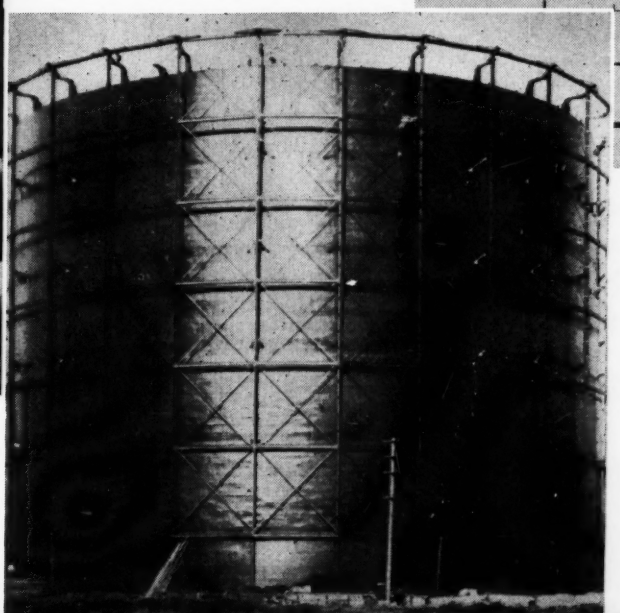
This often indicates a district governor or regulator installed in a vault underground. Use of district regulators to control distribution pressures varies depending upon requirements of specific facilities.





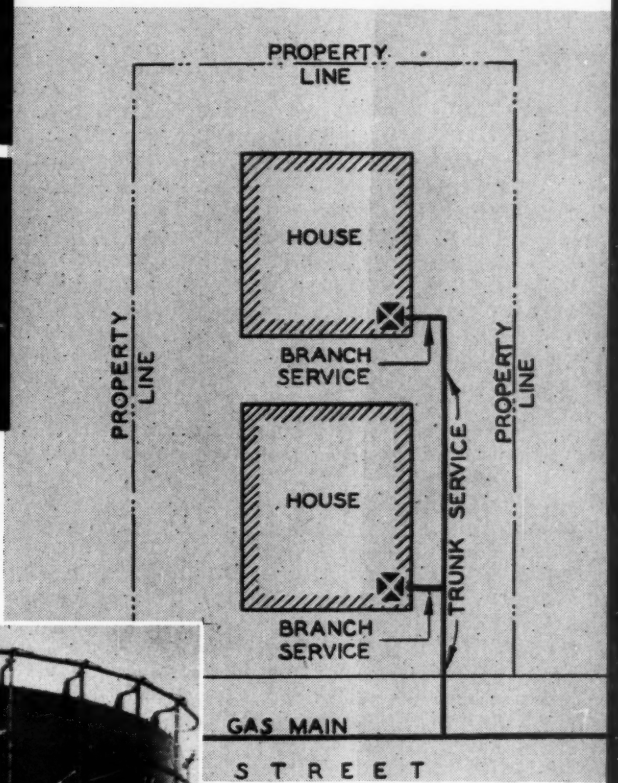
GAS HOLDER

Low pressure holders in common use require compressors to draw gas from storage. High pressure tanks are used to meet peak loads.



ODORIZER

Here the characteristic "smell" is put into the gas, so that leaks may be readily detected.



THE GAS SERVICE

The "service" or pipe which carries the gas from the main to the customer's premises completes the distribution system. In high pressure districts, the final pressure reduction is made at the individual regulator installed immediately ahead of the meter. In low pressure systems, pressure reduction on the customer's premises is not necessary. The diagram shows a branch service which accommodates two houses on one lot. The gas is now available for its domestic job—cooking, water heating, space heating, and refrigeration, or for industrial or commercial uses.

local history, then the statistics and dates will become significant to the listener. Early pictures of Company plants and the men who operated them tend to make the discussion take on life and meaning, thus increasing group interest.

In treating Company operations such as production (or manufacturing), transmission lines, storage facilities, compressor plants and the distribution system, it should be borne in mind that the material is being presented primarily so that the new serviceman can answer a housewife's questions about the gas business. The information, therefore, should be accurate, but need not be detailed. She is usually not interested in the fine points and would not understand the significance. The points which are important from the customer's viewpoint should receive equally as much emphasis as the points which we know to be important from the view of Company operations. The much in evidence gas holder and other facilities which attract public attention should be covered rather completely because those are the subjects that are of interest to Mrs. Jones.

Telling the Story

Since a general picture, rather than specific details, is to be portrayed, schematic drawings can be used to good advantage. Pictures of specific installations or additional drawings can be used to supplement the general picture and lend emphasis at appropriate points. The chart on the preceding pages gives a general picture of the manner in which gas is produced, transmitted, and distributed for final utilization by the consumer.

No Orientation Course is complete unless the Personnel policies as they are related to conduct of employees are covered. A well-defined Company policy is helpful in this phase of training but the minor departmental rules should not be overlooked. Minor infractions of rules by new people are usually not regarded seriously in the eyes of supervisors, but even slight reprimands are disconcerting to new employees during the first few days of adjustment to a new job, new surroundings and a new boss. Not only are embarrassing situations avoided, but the new worker is more confident and able to learn his new duties more rapidly as uncertainty regarding behavior and his place in the organization is removed from his mind.

The wife of a West Coast College Professor recently remarked that the man who called to adjust her range had left her with the impression that a competent technician had been sent by her Gas Company to service her appliance. Well informed contact people can do a great deal to supplement our advertising and other attempts to relate the Gas Industry in the public mind with words like "Dependability," "Efficiency" and "Modernity," but it is the responsibility of the Industry to equip our people with the background of knowledge necessary to make such effective contacts.

Report Blames Tank Failure for Cleveland Fire

STRUCTURAL failure of cylindrical tank No. 4 in the East Ohio Gas Co.'s natural gas liquefaction plant was formally charged as the reason for Cleveland's most disastrous fire last October 20 in the report of Coroner Samuel R. Gerber, made public July 24. The Coroner stated that from testimony before the board of inquiry, from personal investigation and from facts gleaned by a committee of technical consultants from the Case School of Applied Science, that there was a structural failure of cylindrical tank No. 4 with a subsequent failure of spherical tank No. 3, which tanks together held 150,000,000 cu. ft. of gas.

The report further found that the Pittsburgh-Des Moines Steel Co. which designed, recommended and built the tanks, failed to make sufficient allowance for secondary stresses which would be developed from the weight of the liquid natural gas when the tank was filled.

The report also stated that the East Ohio Gas Co., the state and city governments must accept a share of the responsibility in the events leading to the disaster.

In the report of the technical consultants it was stated that:

"The practice of other industries handling inflammable and explosive materials in providing for the contingency of failure, were not followed.

"Distances between storage tanks were insufficient, diking system was utterly inadequate.

"Insufficient provision was made against the escape of inflammable liquids and gas into sewers.

"Omission of pressure relief devices is believed to be hazardous.

"Plans and specifications for the construction of the plant omitted some details on supports and anchorages for the piping.

"Fireproofing of storage tanks and greater distances between units might have reduced the possibility of secondary failure (of the spherical tank).

"Principal item in question is the use of 5½% nickel steel for the inner shell (of the storage tank) which is exposed to extreme low temperatures under load.

("Tests by the U. S. Bureau of Mines of the particular nickel steel which was used in the tank show impact values which are much lower than those stated to the designer of the tank to be satisfactory. If long subjected to low temperatures, evidenced by frosting, the structural steel in the outer shell would lose ductility, and this would contribute an element of weakness to the structure).

The Case professors, after nine months of investigation, said that ground tremors, caused by vibrations from the New York Central Railroad and nearby industrial plants had nothing to do with the failure of the gas storage tanks.

"Investigation discloses no single element in the situation which, taken alone, would account for the disaster," the technical consultants said. "It does, however, disclose a number of factors which, taken in combination or accidental coincidence, might account for the disaster."

"The findings of the experts revolve around the construction, design and metals used in the spherical and cylindrical type tanks.

The spheres were so constructed that one sphere was contained within another, the 36-in. space between the two being filled with cork for insulation and support.

One vertical cylindrical tank was constructed within another, the space between being filled with rock-wool which, according to Dr. Gerber, furnished insulation but not support since it did not have the resilience of cork. The inner tank was supported by two circular steel girders which in turn were supported by a number of vertical wooden posts with rocker plates at both ends.

"In building a semi-rigid type of reservoir of the cylindrical tank, the Pittsburgh-Des Moines Steel Co. apparently assumed that the 3.5% nickel steel, which up to this time had proven effective in the spheres, would also be effective in the cylindrical tank which was to contain twice the volume of one sphere," Dr. Gerber said.

CORROSION AND PROTECTION

Of Buried Metallic Structures

Compiled and Abstracted by GUY CORFIELD, Technical Editor, GAS

Locating and Spacing Galvanic Anodes

O. C. MUDD, senior corrosion engineer, Shell Pipe Line Corp., from a paper, "Location and Spacing Galvanic Anodes," presented before the Fifth Bureau of Standards Corrosion Conference in St. Louis.

SOILS with low electrical resistance and constituents that will allow the continued reaction at the anode surface are essential for effective galvanic anode installations. Such soil is an electrolyte by reason of the fact that it contains water or moisture with dissolved chemicals which become ionized. The resistance of this electrolyte varies approximately in an inverse ratio to the quantity of chemicals in solution.

A high concentration of dissolved chemicals in the soil is required for satisfactory galvanic anode locations, and it is desirable to have a surplus beyond saturation. The surplus will slowly replace that consumed in reaction with the anode material, and it will maintain a low resistance through the ground adjacent to the anode. In locations where chemicals are deficient, a surplus can be added when the anodes are installed.

Distribution of soluble chemicals in the earth varies greatly both in size of areas covered and in depths of penetration below the surface.

Soils of high porosity with good drainage—particularly where rainfall is abundant—have little dissolved chemicals remaining, a condition which makes them undesirable for anode installations. Dense impervious clays or shales which contain substantial quantities of natural chemical deposits are best suited for the purpose.

Study of how these chemical deposits came about is for the geologist, but an ability to recognize different soils with relation to their chemical retention is valuable to the corrosion engineer who is interested in the installation of galvanic anodes.

A visual survey over a contemplated site may save hours of tedious measurements or tests; however, the surface indications do not always reveal the true subsurface conditions. Ground that is quite level at the surface may have underlying strata of broken and eroded formations that can be detected only by earth resistivity measurements.

Resistivity measurements are used not only to determine the relative degree of chemical concentration in the soil but also provide the most practical method yet found to locate the areas of high chemical content in which anodes may be installed.

Two practical methods of resistivity determination—requiring a minimum of time and labor—are: (A) Four electrode method[1]; (B) Radio balance method[2].

The "four electrode" method is most readily carried out with a specially-designed earth "megger"; however, the principle may be used with other equipment as noted in Fig. 1.

The "radio balance" method is responsive only in soils having a resistivity of 1000 ohms or less per cubic centimeter, but this limitation is perhaps desirable because soils of higher resistivity are not satisfactory for anode locations.

Staking out a system of uniform coordinates over the ground surface where installations are to be made

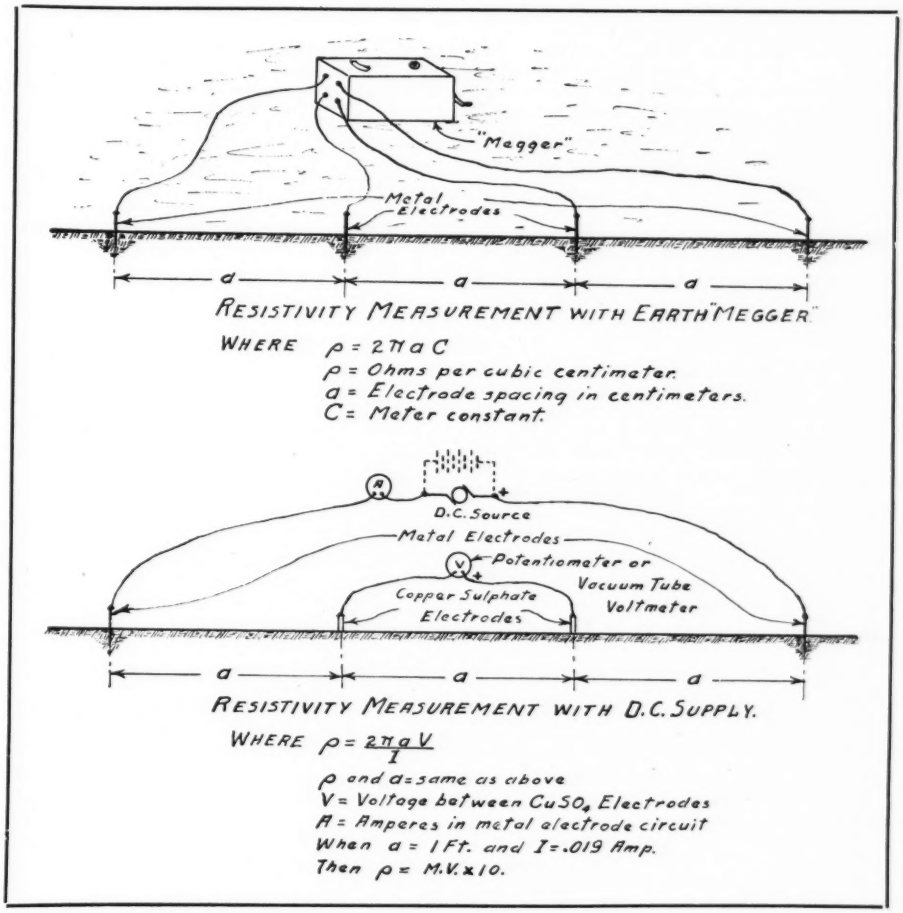


FIG. 1. Galvanic anode locations and spacing.

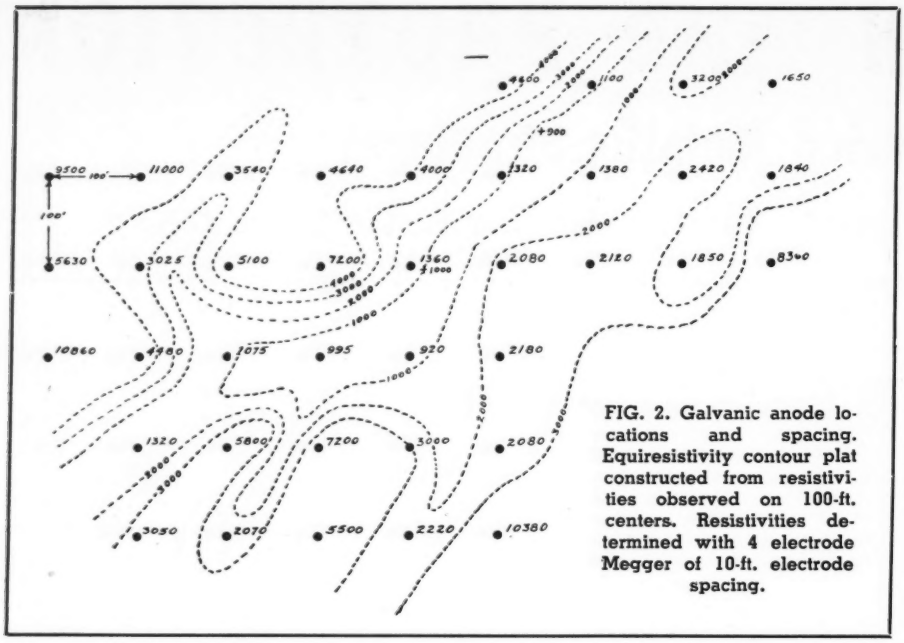


FIG. 2. Galvanic anode locations and spacing. Equiresistivity contour plat constructed from resistivities observed on 100-ft. centers. Resistivities determined with 4 electrode Megger of 10-ft. electrode spacing.

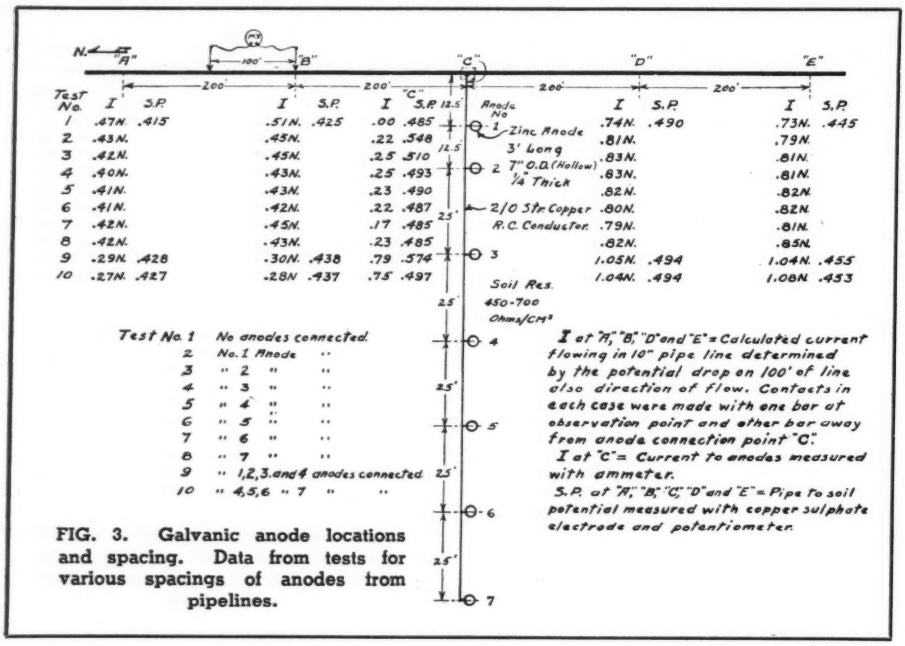

N.
"A"
"B"
"C"
"D"
"E"
100'
200'
200'
200'
200'
Test No.
I
S.P.
I
S.P.
I
S.P.
Anode No
I
S.P.
I
S.P.
1 .47N. .415 .51N. .425 .00 .485 1 .74N. .490 .73N. .445
2 .43N. .45N. .22 .548 .81N. .79N.
3 .42N. .45N. .25 .510 .83N. .81N.
4 .40N. .43N. .25 .493 .83N. .81N.
5 .41N. .43N. .23 .490 .82N. .82N.
6 .41N. .42N. .22 .487 .80N. .82N.
7 .42N. .45N. .17 .485 .79N. .81N.
8 .42N. .43N. .23 .485 .82N. .85N.
9 .29N. .428 .30N. .438 .79 .574 3 1.05N. .494 1.04N. .455
10 .27N. .427 .28N. .437 .75 .497 1.04N. .494 1.08N .453
12.5
1 Zinc Anode 3' Long
2 7" O.D.(Hollow) 1/4 Thick
2/0 Str. Copper R.C. Conductor
25'
Soil Res. 450-700 Ohms/CM³
25'
25'
25'
4
5
6
7
Test No. 1 No anodes connected.
2 No. 1 Anode "
3 " 2 " "
4 " 3 " "
5 " 4 " "
6 " 5 " "
7 " 6 " "
8 " 7 " "
9 " 1,2,3.and 4 anodes connected.
10 " 4,5,6 " 7 " "
I at "A," "B," "D" and "E" = Calculated current flowing in 10" pipe line determined by the potential drop on 100' of line also direction of flow. Contacts in each case were made with one bar at observation point and other bar away from anode connection point "C."
I at "C" = Current to anodes measured with ammeter.
S.P. at "A," "B," "C," "D" and "E" = Pipe to soil potential measured with copper sulphate electrode and potentiometer.

FIG. 3. Galvanic anode locations and spacing. Data from tests for various spacings of anodes from pipelines.

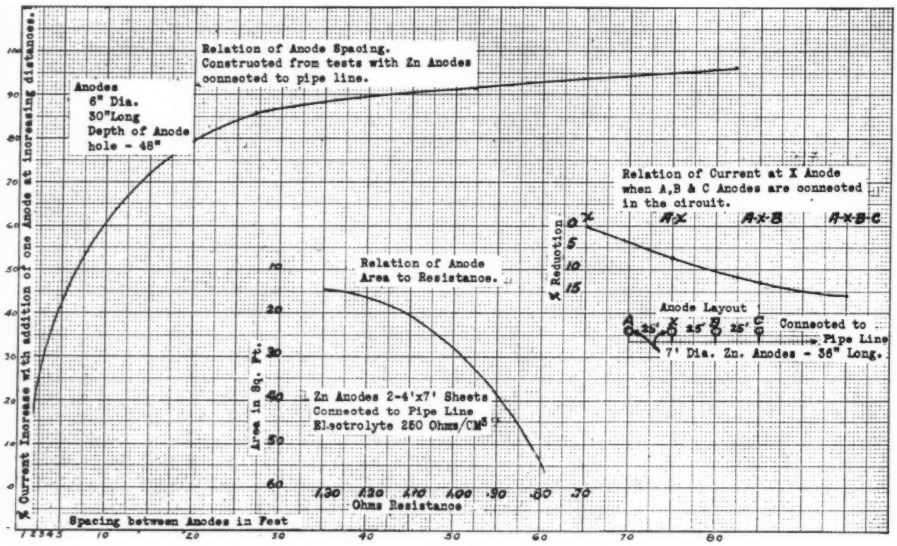

% Current Increase with addition of one Anode at increasing distances.
Spacing between Anodes in Feet
Relation of Anode Spacing. Constructed from tests with Zn Anodes connected to pipe line.
Anodes 6" Dia. 30"Long Depth of Anode hole - 48"
Relation of Current at X Anode when A,B & C Anodes are connected in the circuit.
A-X
A-X-B
A-X-B-C
% Reduction
Relation of Anode Area to Resistance.
Area in Sq. Ft.
Zn Anodes 2-4'x7' Sheets Connected to Pipe Line Electrolyte 250 Ohms/CM
Ohms Resistance
Anode Layout
Connected to Pipe Line
7' Dia. Zn. Anodes - 36" Long.

FIG. 4. Galvanic anode locations and spacing.

will simplify the plotting of the respective measurements and the sketching of equiresistivity contour lines to show the general trend of low resistivity sub-strata. Such sketches help in choosing areas for further investigation.

An actual problem of anode location is shown in Fig. 2, illustrating a case where the area below 1000 ohms per cu. cm. was limited.

Proper spacing of anodes, not only with reference to the structure to be protected but also with respect to each other where more than one is installed, is determined by the resistance of the respective current paths involved. It is advantageous to locate anodes close to the structure so as to minimize potential drop through the soil, and yet they must be kept far enough away (1) to insure uniform current distribution over the surface where protection is needed and (2) to prevent diffusion toward the structure of any chemicals that may be added around the anode when installed. Sections of underground pipelines where corrosion occurs are generally only a few feet in length, so it is advisable to place the anodes within 15 ft. of the line if the pipe diameter does not exceed 12 in.

The effects of spacing anodes at various distances from a pipeline are illustrated in Fig. 3.

The distance between adjacent anodes must be selected practically so that it will allow sufficient soil area for current flow from each to the structure and at the same time far enough to avoid the potential drop caused by current density in the overlapping fields between them. The relation of current to anode spacing is graphically illustrated in Fig. 4 for a specific size of anode. The general rule is to space anodes from 30 to 50 anode diameters apart. The problem of anode spacing has been described in some detail, with substantiating calculations, by **W. B.** Schneider[3] whose findings have been verified by observations in the field.

The relation of anode areas to resistances, as well as the relation of current for multiple anodes, are illustrated in Fig. 4.

BIBLIOGRAPHY

1. United States Bureau of Standards Bulleting No. 258—"A Method of Measuring Earth Resistivity," by Dr. F. Wenner. L. M. Goldsmith, Chief Engineer, Atlantic Refining Co. in the Petroleum Engineer—April 1938.

2. Wm. E. Huddleston, Cities Service Gas Co. Paper presented at Petroleum Industries Electrical Assn., Cathodic Section, Kansas City, Mo., Jan. 15, 1942; Published in P.I.E.A. Electrical News—February 1942.

3. W. R. Schneider, Bureau of Tests & Inspection, Pacific Gas & Electric Co. Pilot Grounds for Cathodic Protection of Pipe Lines. Published in Western Gas—August 1934.

Immersion Tube Heating With Gas

By MAURICE J. DEWEY

President, Dewey Gas Furnace Co., Detroit, Mich.

DURING the past few years immersion heating with gas has rapidly developed into a sizeable branch of the industrial gas heating industry. We use the words immersion gas heating in a broad sense; that is, we consider it immersion heating even though the tubes may be immersed in air or gases, liquids, or solids.

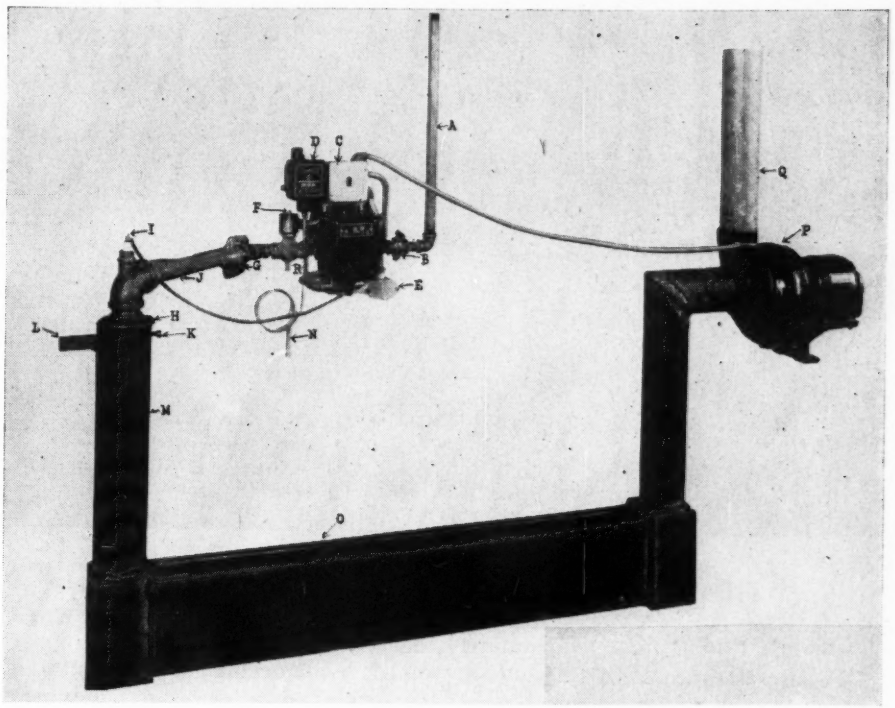
Of course when the tubes are in a gas or air they are also called radiant tubes. However, the important part is to burn gas efficiently inside a combustion tube and to dissipate the greatest possible amount of the heat units in the gas through the tube and into the surrounding medium. To go still further, this dissipation of heat should extend over the tube for a considerable distance, evenly, so that the heat delivered to the surrounding medium will produce a uniform and controlled temperature.

Having thus briefly described the primary objectives of immersion heating, let us examine the factors involved in acquiring them. We all know that if a flame and hot waste gases travel past a surface at relatively high velocity, heat will be transferred through the surface more rapidly than at relatively low velocity. We also know that if a gas-air mixture, while burning, strikes a cold surface there is a tendency to retard or even stop combustion. It is therefore advisable to produce conditions wherein the flame itself does not impinge too violently against the cold surface.

We have found that to have a burner centrally located in a pipe with a controlled amount of secondary air completely surrounding the burner tip, the flame is actually surrounded for a considerable distance beyond the tip of the burner with an annular tube of air which gradually increases in temperature as it mixes with the flame. By this arrangement we effect two desired results:

(1) Prevent the flame from actually striking a cold surface.

(2) Permit the secondary air to gradually mix with the burning air-gas mixture, thereby lengthening the flame and producing a more uniform temperature for a considerable length beyond the burner tip. By having this burning mixture travel at a high velocity a rapid and uniform heat transfer is effected.



Dewey Immersion Tank Heater

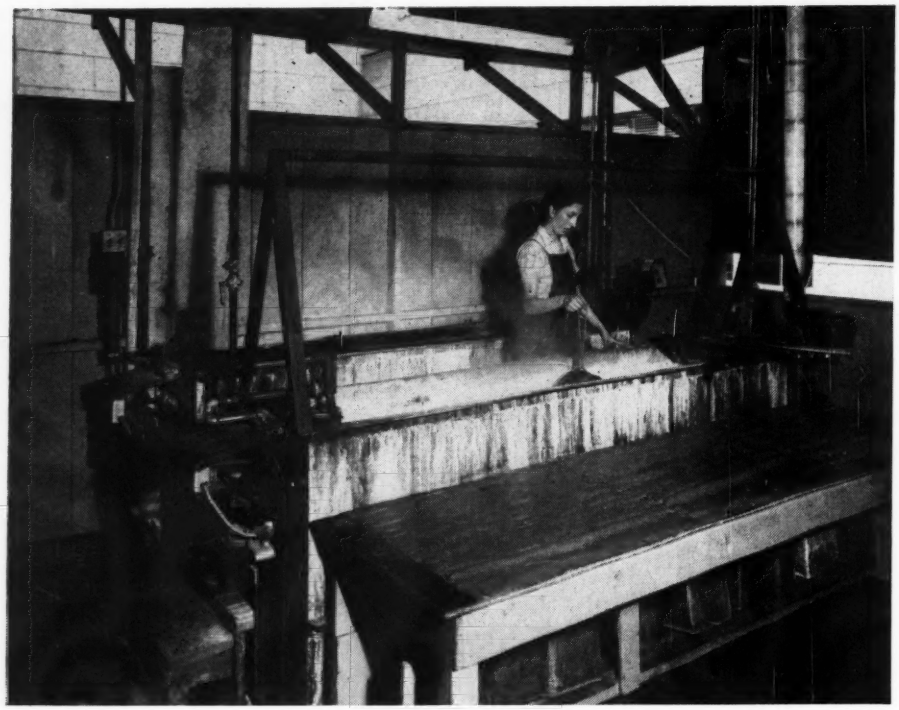
A—Gas pipe line.
B—Lever-handled gas cock.
C—Connection box and cutoff switch.
D—Temperature controller.
E—Dewey airflow switch.
F—Magnetic gas valve.
G—Primary air mixer (adjustable).
H—Secondary air mixer (adjustable).
I—Igniter.
J—Venturi mixer.
K—Set screw to hold and center burner.
L—Hold-down flange.
M—Combustion tube.
N—Temperature controller bulb.
O—Rectangular immersion heating tubes.
P—Suction blower.
Q—Vent pipe stack.
R—Gas regulator (back of transformer).

At the beginning of our research into the various ramifications of immersion gas heating we soon realized that atmospheric burners would not give us sufficient velocity of flow of flame and waste gases, and consequently the amount of gas that could be consumed properly in a given size tube was relatively small. Also with power burners, in which are introduced both air and gas under pressure, it was difficult if not impossible to properly control the ratio of secondary air to primary air, and gas.

Burner Tip Turbulence

The pressure power burner produced so much turbulence at the burner tip that the combustion took place too close to the tip or else failed to effect complete combustion. This also caused localized heating near the burner tip. The logical answer was to introduce the air and air-gas mixture into the tube under negative pressure, which in turn produced a fairly streamlined flow for some distance beyond the burner tip—in fact until a sharp turn was reached.

Our first thought was that immersion heating was adapted principally for heating liquids at comparatively low temperature; in other words, liquids having a boiling point similar to that of water. However, special demands by the army and navy for operations which had not been perfected before got us quickly into problems far beyond our original plans. Therefore, after we had made immersion heating apparatus for several manufacturers for use in spray washers, rinse tanks, alkali tanks, etc., we were called upon to design and build a lead plating tank which would hold approximately 40 tons of lead at a temperature of 800° F. We might add that 63% of the total Btu. con-



Dewey Immersion Tank.

tained in the gas was transferred into the molten lead at that temperature.

We are glad to report, however, that all the difficulties we encountered were relatively minor and were quickly corrected, and, although more than three years have elapsed since the first one of these units was placed in operation, not one of them has given serious trouble and all 12 of these furnaces that were supplied to the one company are either in operation or ready for operation on a moment's notice.

Another problem that we know is very frequently encountered is how to heat a pickling solution efficiently and uniformly by means of gas. We have found that by immersing a leadlined steel tank in another tank containing water, in which are also located immersion heating tubes with a temperature limit controller in series with a temperature controller of the pickling solution, we have a long-lived installation that operates with high efficiency. The tubes are out of the way of the work, and the rate of heat transfer is surprisingly rapid.

Usually it is not necessary to maintain a water temperature more than a very few degrees higher than the temperature of the pickling solution. Of course, this difference of temperature is greater if a large amount of work is being put through per unit of time.

There are cases, however, where this method does not meet the requirements of the user. He may already have a wooden tank or a rubber-lined ceramic tank, or he may want to pickle heavy pieces of equipment which might damage a leadlined tank. In this case we find it advisable to make a test by immersing several different alloy materials and other materials into the solution that is being used. Then, from a laboratory check of the samples, we can determine the penetration per year caused by the acid.

Different alloys are affected differently under various conditions. For example, our experience shows that type 316 stainless steel is usually best for sulphuric acid solutions where steel is being pickled. It is also best where brass or copper is being treated. For stearic acid heating, where no discoloration is permitted, we find that pure nickel or inconel tanks and tubes are the answer. For zinc chloride flux solution we have had excellent results with 35% nickel 15% chromium alloy.

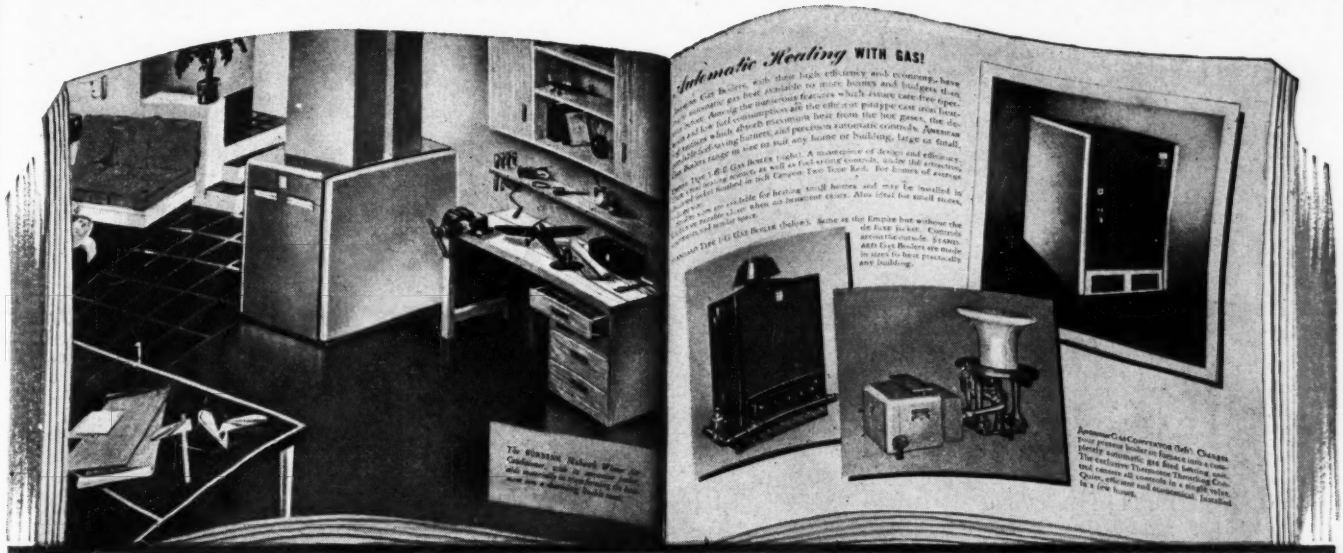
For heating drawing salts with a nitrate base, also neutral salts with a chloride base, up to 1100° F, we find that centrifugally cast tubes of 25% chromium and 12% nickel are thoroughly satisfactory. For nitrate salts at comparatively low temperature (say 800° F, or less), ordinary steel tubes seem to suffice. We have several installations that have been in operation for more than a year and none of them show the slightest tendency toward deterioration.

As mentioned previously, the heating of pickling solutions by means of the double boiler principle is proving to be an excellent means of operating at higher temperatures, except that a molten drawing salt or other suitable salts are used in place of the water. For example, in soft metal melting such as zinc, aluminum, lead, tin, diecast metal and others, the pot containing the metal sits in another pot containing the salt and the immersion tubes. This method has the advantage of producing uniform temperature throughout the surfaces of the pot and the salt surrounding the pot prevents oxidation. Owing to the fact that there are no hot spots on the pot holding the metal, a minimum amount of deterioration of metal is realized.

Molten Magnesium

We are now attempting to increase this field to still higher temperatures; that is, for the maintenance and raising of the temperature of molten magnesium. We are planning to furnish the equipment for increasing the temperature of molten magnesium in steel crucibles containing 2000 lb. of magnesium and raising the temperature from 1250° F to 1600° F. Of course, those temperatures are too high for drawing salts; that is, the nitrate base salts. However, the cyanide, or neutral salts which have chloride base, will operate at these temperatures. In this case, we expect to have a salt pot refractory-lined, and because our immersion burners are inside the immersion tubes it is necessary to use alloy burner tips to withstand the ambient temperature of the molten salt when the burners are not in operation. The burners will remain comparatively cool while the air-gas mixture and the secondary air is passing by them at a rapid rate.

Our experience with electric ignition has been extremely gratifying. It might be said that we were forced into the use of electric ignition, because when our burners are not in operation there is no oxygen in the tubes to support the combustion of a pilot light. When we first started out we expected we might have trouble, but, surprising to say, ignition failure is almost an unheard-of event. An igniter operating even as a continuous spark all during the time the burner is in operation has a surprisingly long life. It is proper to expect at least one year life for an igniter even when operating 24 hours per day and seven days per week.



The new AMERICAN-Standard HOME BOOK helps to sell gas heating

Right off the press at a time when people are planning better heating for their homes comes this new American-Standard Home Book. In its pages the important subject of heating homes by gas—including winter air conditioning—is discussed, and equipment is shown in full color. There is also a section on gas water heaters.

Thousands of these new books are now being distributed to prospects by local heating and plumbing contractors. These contractors are also doing a real selling job for you by informing home-owners about gas heat and the type of equipment that will heat their homes most economically.

We'll be glad to send you a copy of the new Home Book for your office files. Just write us, P. O. Box 1226, Pittsburgh 30, Pa.

AMERICAN RADIATOR & Standard Sanitary
New York CORPORATION Pittsburgh

POST-WAR NOTES and NOTIONS

By STANLEY JENKS

Cooperative Appliance Sales

Of course, there is a happy medium. I have in mind the demands of certain dealer groups that utilities quit merchandising. This page has always been sympathetic to the rights of a dealer to sell quality approved gas appliances without gas company competition. That is an attainable ideal, but in practice, it must be confessed, far from immediate realization, because both dealers and utilities lack the desire to make it so. The spirit of mutual trust is lacking. The dealer isn't load-minded enough to suit the utility—he never will be for that matter, and it's none of our darned business anyway—and the utility in turn hates to give up a load-building activity which maybe, or almost, finances itself.

The happy medium is an appliances sales policy that puts the utility in the position that it can and will make the appliance sales quota if the dealers can't or won't. For example, if every dealer in town handles an A.G.A. approved or CP gas range of his own choice (not necessarily wholesaled to him by the gas company), you have the basis for a sound, intensified sales effort, because you have several independents with a profit interest in the utility's load. If the utility assigns its own sales representatives to helping those dealers and uses the funds it normally needs for merchandise stocks to finance these sales, the yardstick is there to measure the program's effectiveness. I feel the utility should maintain a position of constructive cooperation aimed primarily at keeping such sales profitable to the dealer. On the other hand, as I have already indicated, if the dealers lie down on the job, or their appliance standards wobble in the face of their own competition, the gas company must be right there to take up the slack.

This really boils itself down to the basic fact that no gas company, or any other business for that matter, ought to turn over its load-building activities to any group without recourse. But for Pete's sake, that doesn't mean it has to mollycoddle, handcuff, or kick in the teeth any dealer who has ideas of his own on how best to sell gas appliances.

Customer Acceptance

Another important angle in formulating a workable dealer cooperative program is correctly appraising the degree of acceptance enjoyed by the various types of appliances.

In a territory where gas cooking is the rule rather than the exception, the dealers can be expected to do the major job. But, if in the same territory, furnace coils, coal pots, and what have you are carrying the major part of the water heating load, it continues to be the gas company's prime responsibility to pioneer the use of the automatic water heater. Dealers cannot pioneer, nor as a rule are they trained for specialty sales work. Many so-called pre-war dealer cooperative sales plans were nothing more or less than "hand-outs" to keep dealers quiet while the gas company did the job itself. In one utility I know, confronted by the organized might of some of these unionized dealer groups, the water heater sales effort was compromised in this way. The master plumbers said they could sell water heaters if they could get gas company time payment terms, trade-in allowances, etc., and insisted that they were the only people who should be permitted to make the connections. The gas company, its fingers crossed on the selling ability of the master plumbers, finally agreed to finance the master plumbers' sales of any A.G.A. approved automatic storage water heater, absorb the agreed-upon trade-in allowance, and give the master plumber the installation of an automatic water heater sold by the gas company for every one sold and installed by the master plumber.

In other words, the dealer was required to make his own sales to get the gas company gravy (installation work). As a matter of fact, in these pioneering days, it worked like a charm, and, while the gas company retained its right to do the job itself, it secured the active support of a group which in the past had found it more profitable to knock the automatic water heater and make a sweet profit on the sale and replacement of furnace coils.

New Homes

To the gas company, new homes spell new and better customers and new opportunities to sell more gas per customer, if the proper seed is being planted now.

Some of us have, therefore, been watching very carefully the post-war home-building program. The situation gets gloomier every day—that is the immediate prospects for action.

Like many more post-war dreams which are exploding in the dreamer's faces, the expectancy of 1,000,000 new homes in the first post-war year just isn't there. In fact, builders even despair of half that number. The lumber shortage, both material and labor, is a real bottleneck. Also, looms ominously a bottleneck in auxiliaries such as hardware, pipe fittings, and gas stops, unless OPA gets off its high horse and recognizes that non-profitable ceilings on manufacturers' products are a far greater inflationary threat than are involved in production-producing price levels.

The gas industry wants its industries operating, its customers employed, and adequate material available for deferred maintenance and new construction. As things are at present—and I fully recognize the need for price controls until supply in all fields has caught up with demand—the oceans of directives, rules, and regulations created by a bureaucracy on the rampage are the biggest inflationary threat of all.

Priorities Regulation 29 To Aid Utility Construction

Priorities Regulation 29, issued by the War Production Board on June 30 will soon abolish the advantages of preference ratings and allotment symbols particularly on lead time items and will thus permit utilities to profit more fully from the relaxations of the controls of construction which OWU adopted in accordance with an announcement from Edward Falck, OWU Director.

On January 1, 1946, the preference ratings and allotment symbols assigned by utility orders for maintenance, repair and operating supplies and those specifically assigned for major construction on Form WPB-2774 will become invalid along with all other AA preference ratings and allotments issued by WPB. Up to that time the AA rating system will remain in effect, but only in so far as deliveries to be made in 1945 are concerned.

After October 1 all outstanding AA ratings become invalid on orders calling for delivery in 1946; however, up to that time, such ratings may be used to obtain a place on 1946 delivery schedules for products which require long production cycles.

Tennessee Gas Contracts Aid Conservation

The Barnsdall Oil Co., Tulsa, Okla., has entered a contract to deliver and sell to the Tennessee Gas and Transmission Co., of Houston, Texas, a minimum of 15,000,000 cu. ft. of vent and natural gas from the Barnsdall properties in the Placedo field of Victoria County, Southwest Texas fields.

This is the second instance where the Tennessee company has arranged to take gas that otherwise would be flared into the air, and put it to useful purposes. In May, the Tennessee bought 230,726,000 cu. ft. of gas produced by three companies in the Stratton-Agua-Dulce field of Nueces county and in June it took 215,723,000 cu. ft. from the same source.

Equitable Gas Co. Rate Raise Denied by PUC

The Pennsylvania Public Utility Commission in Harrisburg, Pa., has denied the petition by the Equitable Gas Co., of Pittsburgh to raise its rates to approximately 185,000 consumers. Decision is final unless an appeal is filed by August 13.

Equitable's proposed increase would have boosted domestic consumer rates from 59c to 80c a month. Rate increases were recently granted to Peoples Gas Co. and Manufacturers Light & Heat Co., which also serve the Pittsburgh area.

C. B. Builds Compressors To Avert Winter Shortage

The Cooper-Bessemer Corp. is rushing to completion 17 compressors, totaling 20,000 hp. to be used by Panhandle Eastern Pipe Line Co. to pump an additional 50 MMcf. of gas daily from Texas to Ohio, West Vriginia, eastern Indiana, and lower Michigan.

If a gas shortage is to be averted in the area next winter the compressors must be completed not later than September 15, Cooper-Bessemer employees were told by government representatives last month.

MAKE Magic Chef
THE HEART OF YOUR
New Freedom Gas Kitchen
A "NEW FREEDOM" KITCHEN like this, with this beautiful postwar Magic Chef as its heart, is something you can only plan for today. But, unlike a lot of pleasant dreams, it is one that can easily come true—we hope soon.
So, as you think ahead to your home of tomorrow, build your kitchen dreams around Magic Chef—the gas range with a dozen magic helps to take the work and worry out of cooking. "Magic" is the right word for the speed and certainty of its results and the many thoughtful conveniences it will provide. Just as soon as conditions permit, see this Magic Chef at your Gas Company, or Magic Chef dealer's showroom. Meanwhile, plan on new kitchen freedom—with gas, the ideal fuel.
The Gas Range with the "Dozen Magic Helps"
Automatic Oven Cooking
Red Wheel Oven Regulator
Automatic Lighting
Easy Cleaning
Swing-Out Broiler
Thin-Chop Burner
Magic Insulation
Even Heat
Convenient Work Top
Cross-Fire Oven Burner
Porcelain Enamel Finish
Look for "GP" Seal of Approval
● Wherever you live—city or country, along the gas mains or beyond them—you can own and enjoy a postwar Magic Chef. These fine ranges will be available for "Pyrofax" Gas in eastern and central states and for other L. P. (bottled and tank) gases elsewhere.
AMERICAN STOVE COMPANY • Cleveland, Ohio
Magic Chef
THE RED WHEEL GAS RANGE WITH THE LIFETIME BURNER GUARANTEE

One of American Stove Co.'s "Magic Chef" national advertisements which is appearing and will continue to appear throughout the year in the Saturday Evening Post, Good Housekeeping, Woman's Home Companion, Better Homes and Gardens, American Home and Parents' Magazine.

American Stove Co.'s National Advertising

TYING in with the American Gas Association's "New Freedom" gas kitchen promotion, American Stove Co.'s national advertising program, featuring Magic Chef ranges in attractive, colorful kitchen settings, is helping to make American housewives more conscious of postwar kitchen improvements.

All advertisements in the 1945 campaign illustrate up-to-the-minute Magic Chef ranges in "New Freedom" gas kitchens. Each advertisement shows a kitchen that combines unusual architectural ideas with a practical, workable design.

Housewives are reminded that they can start now to plan the kitchen they have always dreamed of—whether they are planning to build new homes or to modernize. Since much of the activity in the kitchen centers around the range, the theme "Make Magic Chef the Heart of Your Kitchen" is carried through the entire series. The "Dozen Magic Helps" of the Magic Chef are also spotlighted in each ad.

Magic Chef's 1945 advertising is appearing throughout the year in *Saturday Evening Post, Good Housekeeping, Woman's Home Companion, Better Homes and Gardens, American Home and Parents' Magazine.* The combined circulation of this group totals 14,830,768.

A tie-in program for Magic Chef dealers and utility customers includes newspaper, direct mail and display advertising. A wide selection of newspaper ads has been supplied dealers and utilities for local use over their own names.

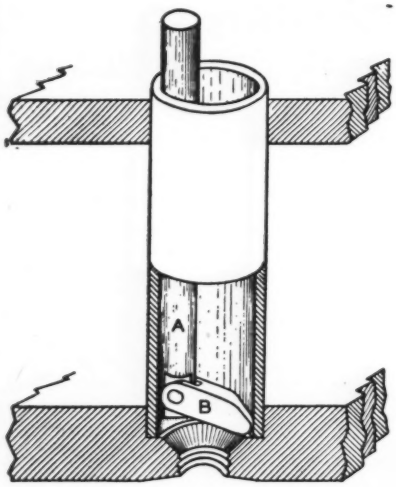
OPERATING IDEAS

Tool For Plugging Water Leak in Spark Plug Well

ARTHUR W. ABENDSHIEN, auxiliary engineer, Olpe Compressor Station, Panhandle Eastern Pipe Line Co.

In the construction of the spark plug well expander, Part B must be long enough to hold the bottom of Part A off the bottom of the spark plug well. The material used in making the expander is a 5/8 in. spoke rod, as is used in tying concrete forms, but any mild steel will do. No dimensions are given as the tool may be made to fit any size well.

SPARK PLUG WELL EXPANDER



In use, it is inserted into the well as shown, and tapped sharply. The tool is moved about 1/4 of an inch at a time until it has been completely around the well.

This tool has been in use at Olpe station for about six months, and has saved a number of wells, and approximately an hour of the time it would take to pull and replace each well.

Holiday Tester
For Non-Metallic Coatings

From AGA's "Report of Subcommittee on Wrinkles," W. R. FRASER, Michigan Consolidated Gas Co., Detroit, Chairman.

A method to detect pinholes and flaws in "glass" coatings on metal, such as glass lined water heater tanks, has been used successfully.

One lead of a sensitive galvanometer is soldered to the metal shell of the test piece. The other lead is soldered to a piece of copper gauze wrapped with absorbent cotton. This cotton swab is saturated with a 2% sodium chloride solution and used as a probe on the surface under test. Any pinhole or flaw in the coating which leaves metal exposed will cause a deflection of the galvanometer needle when the probe passes over such a spot. Variations of this method may be applied to protective pipe coatings.

Line-up Clamp

JULIUS LAENGER, maintenance crew welder, United Gas Pipe Line Co., at Latex in Shreveport district.

To complete a weld in one operation, this line-up clamp or more appropriately, saddle or cradle—was built of scrap material.

Although most welders probably have no objection to conventional types of line-up clamps which require removal following tacking before completing a weld to join two lengths of pipe, Laenger's device has certain innovations and advantages that will appeal to others like himself.

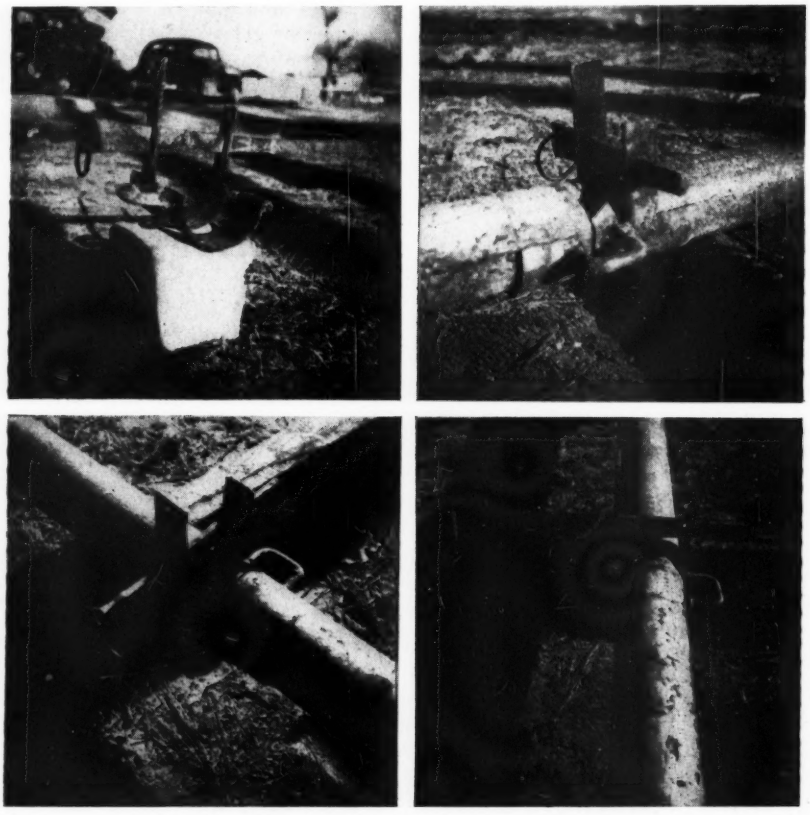
The working principle is shown in the accompanying picture, the clamps chief advantages being the long cradle rests provided for ends of the pipe to be welded and the clearance it gives the welding torch, permitting a finished weld without removing it from the pipe.

By leaving the clamp in place until the weld is completed, there is no danger of a broken tack weld caused by movement or slippage of one of the joints of pipe.

The clamp pictured is for 4-in. pipe. It was made of a piece of junked 6-in. pipe, approximately 8 in. long, cut in half endwise to form the cradle rests. The two halves are joined together on either side by pieces of 1-in. reinforcing rod which are bent at right angles and allow sufficient space for running a bead completely around the pipe.

The pin and pin section, made of metal strips cut out of discarded line pipe, are high enough to permit driving the pin through slots provided for it to clamp the pipe securely.

With the end of the pipe centered in the space between the two cradle sections, the end of the pipe to be welded on is placed in the other cradle section, thereby providing the proper welding alignment.



Four views of line-up clamp built of scrap materials, which permits finished weld without removing it from pipe.

Rationing of Cooking and Heating Stoves Ended

OPA and WPB announced the end of rationing of gas cooking and gas heating stoves to consumers on July 31. Combination ranges, except oil-gas combinations, also will be sold certificate-free after that date. A substantial increase in production of gas heating and cooking stoves is scheduled for this quarter.

Oil cooking, oil heating, combination oil - gas stoves and oil conversion burners for stoves will remain rationed.

The supply of fuel oil and kerosene is so short, it was explained, that unrestricted sale of oil burning stoves cannot be permitted. They will remain under the same rationing restrictions as formerly.

Consumer certificates for gas cooking and heating stoves will not be issued by local War Price and Rationing Boards after July 31, OPA said. Dealers and distributors will be able to buy these stoves without certificates after July 31. However, they may continue to use certificates with orders placed on or before August 15.

Since orders accompanied by certificates are to be shipped before orders received for the same type of stoves not accompanied by ration certificates, this will enable dealers and distributors to replenish their stocks, and consumers to get stoves on certificates before stoves are sold certificate-free.

"Saga of Gas Range" Reprints Available

Reprints of an article, "The Saga of the Gas Range," by Margaret Partlow Graham, which appeared in the May issue of "What's New in Home Economics" are now available through both the American Gas Association and the Association of Gas Appliance & Equipment Manufacturers.

Additional copies up to 10 per company will be forwarded by A.G.A. free of charge on request. For larger quantities, the price is 5c a copy f.o.b. New York.

Members of A.G.A.E.M. should order additional quantities through James I. Gorton. The reprinting has been restricted to 10,000 copies.

"Town of Tomorrow" Published by Bryant Heater

Bryant Heater Co., has published a 42-page brochure entitled "Town of Tomorrow," which reviews the many styles of present-day architecture in America to which gas home heating is adaptable. The booklet contains a representative collection of up-to-date American architecture from every geographical area. All of the homes pictured feature automatic gas heating. Floor plans are included with each design, and in many instances, exterior views of the house are accompanied by photographs of interior details.

Gas Lights Paris Streets

A letter from Colonel W. L. Plummer, former district manager for the Roper Corp. in Atlanta, to Stanley H. Hobson, president of Roper, reveals that gas is used for street lighting in Paris, and that for the first time since the war, the main thoroughfare of Paris on V-E night was aflame with Welsbach burners.

Looking at the new "CP" dealer kit are L. C. Ginn, American Stove Co.; W. M. Chamberlain, chairman, A.G.A. Domestic Range Committee; Ross Roberts, Pyrofax Division, Union Carbide & Carbon Chemicals Corp., representing L-P Gas; F. W. Williams, secretary, residential section, A.G.A.; James I. Gorton, A.G.A.E.M. "CP" Promotional Director.

"CP" Promotion Planned by A.G.A. Committee

THE interim committee of the American Gas Association domestic range committee put into final form a complete "CP" dealer promotional program designed to assist dealers in selling a greater volume of higher grade gas ranges postwar, at a meeting held in New York June 27 and 28. Consultants to the group represent hardware, department stores, furniture, appliance, and L-P gas dealers.

Basic recommendations for action on the part of manufacturers and gas utilities, in addition to a complete coordinated sales plan, included regional dealer meetings, revival of the "CP" Ranger Club and the "CP" Ranger News. Before the war, more than 8500 gas range salesmen participated for prizes in the "CP" Ranger Club. Plans for close dealer utility cooperation were included in the recommendations. The major promotional efforts will be directed at clock control gas ranges built to "CP" standards.

A complete sales training course designed to train new salesmen and to bring older salesmen up-to-date on the latest sale's techniques and in which each manufacturer will augment the sales training programs with his own sales and product stores, will also be available.

Appliances Dealers Intend to Carry Postwar

FOLLOWING is a brief recap of a survey sent to 2461 retail dealers all over the country in October, 1944, by House Furnishing Review of New York City.

Of the dealers surveyed, about 1/3 were department stores, 1/3 hardware stores, the remainder furniture and appliance dealers. A 25% response was received within the first month.

Following are the responses to certain questions asked in the survey:

Major Appliances to be Carried

Refrigerators	94%
Gas ranges	74%
Electric ranges	73%
Space heaters	60%
Water heaters	56%
Clothes dryers	49%

The Immediate Postwar Market

Primarily replacement	48%
New users	30%
50-50 replacement and new users	22%
Quality-conscious market	85%
Price-conscious market	10%
50-50 price and quality	5%
50-50 price and quality-conscious market	5%
Known brands will dominate	91%
New brands will dominate	7%
Private brands	2%

Specialized and Outside Selling

Will not do specialized selling	86%
Will do specialized selling	14%
Will do outside selling	81%
Will not do outside selling	19%

Helps That Dealers Want from Manufacturers

Eight types of help were suggested for immediately after the war. Dealers indicated that their preference was in this order: (1) Sales training helps; (2) Participation in local advertising; (3) National advertising to the consumer; (4) Display materials; (5) Merchandising ideas; (6) Training of servicemen; (7) Sales promotion ideas; (8) Consumer education program.

ASSOCIATIONS

Speakers Accept for NEGA Home Service Conference

President Reynolds of the New England Gas Association has announced that 23 speakers have acepted invitations to lecture at the Home Service Development Conference, to be held in Boston for five days from Sept. 17-21, at which will be covered subjects from gas making through to food making.

The lecturers have been obtained from gas utilities, gas trade associations, home economics schools, women's magazines, radio broadcasting stations, newspapers, appliance manufacturers, food manufacturers, food trade associations and chain food stores. The speakers are compiling texts to be included in loose-leaf books which will be issued to the home service representatives who attend the conference.

Several appliance manufacturers have indicated their willingness to have exhibits at the conference.

Mrs. Lillian P. Dunbar of Cambridge, past chairman of the NEGA Home Service Group, has been the chairman of the committee arranging the conference. The chairman of the home service group is Miss Susan A. Mack of Boston, while the chairman of the sales division is Robert E. Finnin of Boston. Mrs. Hazel Cheever of Malden, immediate past chairman of the NEGA Home Service Group, has been the chairman of a subcommittee which has played an active part in arranging various conference details.

The following subjects will be covered in the program of the conference: Consumer Education; Personnel; Appliance Servicing; Sales-Slanted Equipment Presentations; Kitchen of the Future; Personality in Business; the Development and Writing of Recipes; and Gas Appliance Future.

A.G.A. Water Heater Essay Contest Draws 100 Entries

The essay contest for Home Service on the subject "What Can Home Service Do To Aggressively Promote Adequate Gas Water Heating Service?" sponsored by the water heating committee of the residential gas section, A.G.A. brought forth more than 100 entries from home service departments of gas companies throughout the country.

War Bond prizes went to the following list of winners:

1. Flora G. Dowler, home service supervisor, Manufacturers Light & Heat Co., Pittsburgh ($150).

2. Mary Louise Hurster, home service director, The Laclede Gas Light Co., St. Louis ($75).

3. Dorothy Zieber, home service director, The Consumers Gas Co., Reading, Pa. ($50).

4. Dorothy L. Bartley, home service department, Central Hudson Gas & Elec. Co., Poughkeepsie, N. Y. ($25).

5. Judith E. O'Flaherty, home service department, Philadelphia Electric Co., Philadelphia ($25).

Special awards of a $25 bond went to Rita Abbruzzese, supervisory director, Central Hudson Gas & Elec. Co., Poughkeepsie, N. Y., and Kathryn T. Goodall, supervisory director, Philadelphia Electric Co., Philadelphia, Pa.

West Coast Conference on Domestic Gas Research Held

The West Coast Conference on Domestic Gas Research, sponsored by the committee on domestic gas research, American Gas Association and the manufacturers and sales sections of the Pacific Coast Gas Association, was held July 26 and 27 at the Ambassador Hotel, Los Angeles.

The general session, held at 9:30 a. m., July 26, was presided over by W. M. Jacobs, chairman, PCGA sales and advertising section. A. H. Sutton, past general chairman, PCGA manufacturers' section, director, Pacific Coast Gas Association, presided over the 12:30 p. m. luncheon session, the speaker of that session being F. M. Banks, chairman, A.G.A. Committee on Domestic Gas Research.

The first of the group panel sessions, "Gas Cooking Research," was led by W. M. Couzens, Gaffers & Sattler. A. B. Bamowsky, past chairman, A.G.A. subcommittee on approval requirements for central heating as appliances, presided over "Gas House Heating Research" panel session.

Eugene D. Milener, secretary, A.G.A. committee on domestic gas research, was chairman of the general session held July 27, and Arthur F. Bridge, past president, A.G.A., conducted the luncheon session.

Canadians Elect von Maur At 38th Convention

More than 230 delegates from all parts of Canada, including a liberal representation from the United States, turned out for the highly successful 38th annual meeting of the Canadian Gas Association, held June 19-22 at the Manoir Richelieu, Murray Bay, Quebec.

Jacob D. von Maur, engineer of distribution, Consumers' Gas Co., Toronto, was elected unanimously as president of the C.G.A. to succeed Alan H. Harris, Jr., of the Winnipeg Gas & Electric Co. Harris reverted to the executive board to which two new members were named in the persons of J. A. Brownie, assistant to the vice president and managing director, Canadian Western Natural Gas Co., Ltd., Calgary, Alberta, and E. H. Rohrer, manager, gas department, B. C. Electric Power and Gas Co., Ltd., Vancouver, British Columbia. Other executive members remained in office.

J. French Robinson, A.G.A. president, was the principal speaker at the annual dinner.

NEGA Meetings Scheduled

The New England Gas Association has scheduled three conferences for October in the Hotel Statler in Boston. A conference on safety will be held October 2; on appliance servicing October 16; and the operating division will meet on October 17.

A.G.A. Approves Expanded Advertising Campaigns

The American Gas Association's committee on national advertising has approved two distinctive and concurrent consumer advertising campaigns with a total of 270,000,000 impressions—twice as many as in the 1944-45 campaign—starting the tenth year of cooperative national advertising in October. An enlarged program of industrial and commercial gas advertising, which has been conducted continuously since 1925, with the exception of 1933, has also been approved by the committee.

The slogan "GAS — The Wonder Flame That Cools as Well as Heats," will be retained in the domestic gas campaign, while the industrial and commercial advertising will continue to feature "The Trend Is to Gas" as its slogan.

One series of consumer advertisements will feature an extension of the New Freedom Gas Kitchen theme; the second series will focus attention on the many advantages of residential gas service and gas appliances. Each will run in its selected list of media.

Boothby Nominated For A.G.A. Presidency

An announcement has been made to the members of the A.G.A. of the following nominations made by the general nominating committee which will be presented at the annual meeting of the Association:

For President—E. J. Boothby, vice president and general manager, Washington Gas Light Co., Washington, D. C.

For First Vice President—R. H. Hargrove, vice president, United Gas Pipe Line Co., Shreveport, La.

For Second Vice President—Hudson W. Reed, president, The Philadelphia Gas Works Co., Philadelphia, Pa.

For Treasurer—Edward F. Barrett, president, Long Island Lighting Co., Mineola, N. Y.

A.G.A. Members to Vote On Retirement Plan

The executive board of the American Gas Association has approved a Retirement Income Plan for Association employees. The final approval by the board of directors and the consummation of the plan are contingent upon a favorable vote by the members of the Association.

An outline describing the plan in detail and a ballot on which to record their vote have been sent to all members of the Association. The poll closes August 20, and ballots must reach A.G.A. headquarters before that date.

INGA Adopts Resolution

The Directors of the Independent Natural Gas Association adopted a resolution criticizing the so-called "pressure group," which advocates decreased sale and utilization of natural gas, at a meeting held recently in Tulsa. The resolution urged state laws to prevent waste of oil and gas; government encouragement of exploration of public lands; avoidance of stockpiling when demand is less than supply; and state and federal laws that facilitate, not obstruct.

DEALERS RAVE ABOUT THE FLORENCE AD CAMPAIGN!

THEY THANK HER FOR THE BIG AHEAD-OF-TIME HELP!

ONE AND ALL THEY SAY, "COUNT ME IN!"

I'M OPENING THE DOOR FOR YOU TO OVER 30,000,000 FAMILIES IN SUNDAY MAGAZINES, SUNDAY NEWSPAPERS AND FARM AND HOME MAGAZINES!

- The big Florence advertising campaign now in full swing is designed with but one idea in mind—to help Florence dealers get off to a flying start on postwar sales.

And are dealers enthusiastic? You bet they are! You'd certainly think so if you could see the fan mail (we call 'em love letters) that Florence is getting about her "wonderful job of pre-selling." Veteran Florence dealers, and new ones too, are finding out that joining hands with Florence is a sure road to postwar sales and profits!

FLORENCE STOVE COMPANY... General Offices and Plant: Gardner, Mass. Western Offices and Plant: Kankakee, Ill. Southern Plant: Lewisburg, Tenn. Sales Offices: One Park Avenue, New York; 1459 Merchandise Mart, Chicago; 53 Alabama St., S. W., Atlanta; 301 No. Market St., Dallas.

FLORENCE
Gas Ranges

NEW PRODUCTS

Photoelectric Control System

Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.

Model: Photoelectric Control Type A26X and Light Source Type L11RX.

Application: A photoelectric system which detects the presence of smoke in air-conditioning ducts and immediately sounds alarms, turns off blowers, operates automatic dampers, or provides whatever other type of indication or control is required.

Description: The system consists of Photoelectric Control Type A26X and Light Source Type L11RX. The latter may be mounted to project a beam of light over any distance from 10 to 25 ft. to the "eye" of the photoelectric unit. A sensitivity adjustment on the light source housing permits variation in the intensity of the light beam and may be set so that the photoelectric control will respond to smoke of a predetermined density. Type A26X will then remain inoperative at any other level of illumination, but will

be actuated when smoke haze sufficiently reduces the amount of light reaching the phototube. To provide complete protection, Type A26X is so designed that either current or tube failure will cause the control to operate as though the light beam were interrupted.

Both units are available either in Underwriter-approved explosion-proof housings for mounting in Class 1 Group D hazardous areas, or in weather-proof pressed steel housings. Type A26X operates from a supply of 115 volts A.C. 60 cycles and incorporates a single-pole double-throw relay for normally open or normally closed operation. Relay contacts are pure silver, designed to handle 10 amperes A.C. or 5 amperes D.C. at 115 volts. When using external power, a maximum of 230 volts may be used on the contacts providing 1100 watts A.C. or 440 watts D.C. is not exceeded. Larger currents or higher voltages can be controlled through use of an auxiliary power relay.

Underground Pipe Wrap

Owens-Corning Fiberglas Corp., Toledo, Ohio.

Model: Fiberglas Mat Underground Pipe Wrap.

Application: Employed as a protective covering for buried pipe these mats can be readily impregnated and are compatible with bituminous impregnants such as asphalt, coal tar pitches and synthetic resins. Tensile strength is preserved through a wide range of temperatures and exposure to organic solvents and soil acids. The mat is not impaired as a result of hot application of impregnants most commonly used. Being compatible with these impregnants, the final job is not porous unless so designed by partial impregnation.

Description: The negligible moisture pick-up of Fiberglas Mat makes it a desirable basic material from which corrosion-resistant products may be manufactured. The glass fibers are in themselves non-corrosive to metals. They are chemically stable and thus able to withstand weathering conditions. The high percentage by weight of bitumen, or any other impregnant which may be used, makes possible a continuous water-tight bond with the pipe. The mat may be applied with the bond over the bare pipe and then coated, or it may be bonded to the pipe by a preliminary coating applied directly to the surface of the pipe. The maximum roll length of 450 ft. offers greater than normal length per loading for conventional pipe wrapping equipment. Tensile strength of the unimpregnated mat varies with the thickness; the medium to heavy mats have strengths adequate to permit high speed application at standard machine tensions.

Pressure Sealing Zipper

B. F. Goodrich Co., Akron, Ohio.

Model: Pressure Sealing Zipper. (This zipper is now going exclusively into military products, but will be available for purchase after the war).

Application: For holder purging operation in quick opening and exposure of gas holding and gas carrying vessels.

Description: The Pressure Sealing Zipper is a unique arrangement of overlapping rubber lips applied to a slide fastener to provide an effective and complete seal to any pressures which can be withstood by the structural strength of the fastener. The seal will not let gases or liquids through, even under high pressure.

The zippers are effective in a wide temperature range, the rubber not cracking at 70° F. nor becoming soft or tacky at 150° F. Weatherability is good, it is claimed by the manufacturer.

Three styles of the Pressure Sealing Zipper are now being made, the 400, a non-separating type which seals throughout its entire length but is open at the top, with the slider operated from either or both sides; 410, separating type which seals for entire length but not at the ends with slider operated from either or both sides; and 420, non-separating type, seals at both ends and along entire length, with slider operating from side opposite sealing lips.

Catalogs

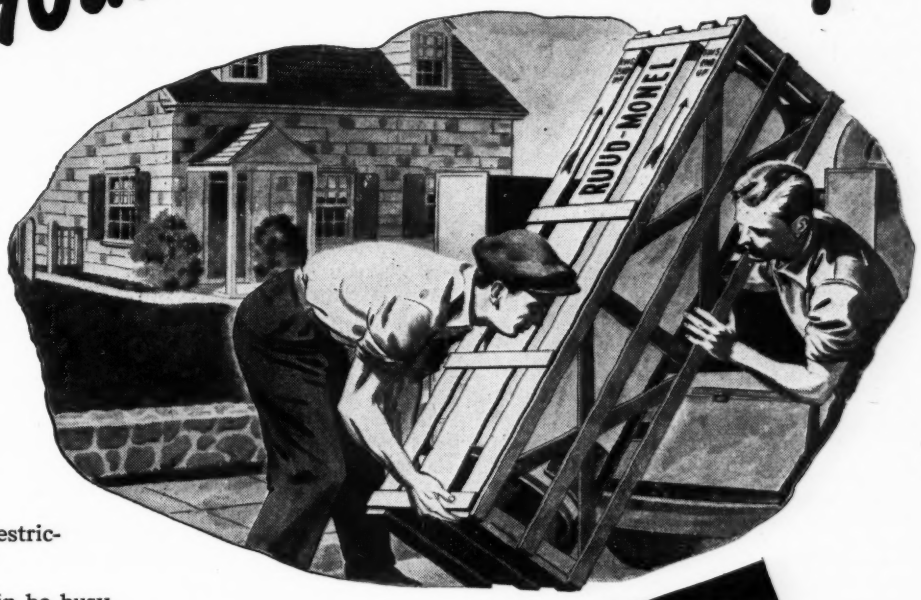
• **Merco Norstrom Valve Co.,** 400 N. Lexington Ave., Pittsburgh, has published an instructive manual designed to guide users of Nordstrom Valves in the proper methods and routine of lubricating plug valves. The bulletin illustrates each type of valve, revealing the operation and gives plain, specific directions how to lubricate, when, and the type of lubricant best suited for specific services. Twenty-four groups of valve parts are illustrated so that the user may select replacements. Grease gun lubrication is also discussed. This bulletin should serve as a convenient reference for servicemen, plant operators and others responsible for efficient valve operation. A copy of the bulletin, V-126, is available upon request to the above mentioned company.

• **Tappan Stove Co.,** 250 Wayne St., Mansfield, Ohio, has recently published a new 28-page portfolio titled "Meet the Challenge." This booklet illustrates some of the important competition factors as "challenges" the manufacturer and dealer will face in the merchandising of Tappan gas ranges when the green light is given for volume production of civilian goods. Steps being made to meet these "challenges" are outlined. Prominent among these are plant expansion, new product development, national magazine advertising, store floor planning and many other things to maintain and strengthen the value of the Tappan dealer franchise.

• **A Temperate Zone in the Zone-Conditioned Home**—A booklet explaining in non-technical language, zone-conditioning published by Payne Furnace Co. Zone-Conditioning is a new name applied to the time-tested Payne principal of unit heating and ventilation, controlled by zones or rooms. Copies of this booklet are obtainable free of charge upon request to Payne Furnace Co., Beverly Hills, Calif.

• **The Bristol Co.,** Waterbury 91, Conn., has announced that a new 16-page bulletin describing their new Microact and other electric-type Pyromaster Controllers has been published. The several different types of controllers are illustrated and described, contact and load circuit wiring diagrams are given, and typical applications are indicated.

They're on their way ... to BOOST YOUR POSTWAR LOAD!



One of these days, wartime restrictions will be eased.

And your trucks will again be busy ... busy bringing your customers the service and satisfaction that goes with *perfect hot water service.*

For that's what folks *really* want ... and what they always enjoy ... when they purchase a Ruud Automatic Gas Water Heater with its long-lasting, *rustproof* Monel* Tank.

The Ruud-Monel line is a quality line, reasonably priced. It's a dependable line for utilities to handle ... and it appeals strongly to every buyer who refuses to gamble with this very *BASIC* home requirement—*hot water.*

BUILD LASTING PRESTIGE AND GOODWILL

See that *your* customers have water heaters that provide an abundance of *clean* hot water ... automatically without fuss or bother ... at any hour of the day or night.

Ruud, an outstanding name in the gas water heater field for more than half a century, welcomes your inquiries. When war restrictions are eased, the NEW Ruud Automatic Gas Water Heaters with Monel Tanks will be rolling off production lines ... to bring the *GAS* industry all the hard-hitting advantages of *two* nationally advertised, nationally promoted and nationally accepted products.

*Reg. U. S. Pat. Off.

RUUD MANUFACTURING CO., PITTSBURGH 1, PA.

H_2OT STUFF

It's not generally known, but Napoleon had a violent dislike for perfume. It was so obnoxious to him, that he wouldn't let his wife, Josephine, use any. So she bathed daily ... and thus set a precedent for *removing* dirt rather than disguising its presence.

★ ★ ★

The man who shaves every day, covers approximately 18,000 square inches of face in the course of a year. During the same time, his wife ... if she's an average housewife ... washes 13 tons of dishes, just about 216 times her own weight.

★ ★ ★

Benjamin Franklin had a unique bathtub built to his order. It was shaped like a huge baby's shoe. After filling the tub with water which had been heated on the kitchen stove or in kettles hung in the fireplace, Franklin would climb in. He'd sit in the heel, and stretch his legs out into the toe. Then he'd adjust his reading stand ... and sit in his bath and read.

★ ★ ★

Gas is the quickest heating of all fuels for automatic water heating. It's clean. It makes no dirt, dust or ashes. It's dependable and economical.

★ ★ ★

Ruud—a quality line since 1889—has been sold all over the world. And it will be again!

RUUD GAS MONEL ... perfect partners for *Automatic Hot Water Service*

PEOPLE

• **C. V. Sorenson** has been elected president and a director of the Indiana Service Corp., Fort Wayne, Ind., by the board of directors. Sorenson previously held the position of new business advisor of Indiana Service Corp., and the Northern Indiana Public Service Co.

C. V. Sorenson

He is a past president of the Indiana Gas Association and formerly served as chairchairman of the Residential Section of the A.G.A. He was also a member of the A.G.A. Postwar Planning Committee and chairman of the subcommittee on Postwar Purchasing Power & Potential Markets.

• **L. A. (Bill) Williams** has been elected a vice president of the Puget Sound Power & Light Co., Seattle, by the company's board of directors. Williams joined Puget Power in the early thirties as assistant to Frank McLaughlin, president. Subsequently he was appointed advertising and sales promotion manager, at the same time continuing his duties as assistant to the president. In 1936 he was sent to Everett, Wash., as manager of that district and in 1941 was shifted to the Stuart Bldg., Seattle, as executive assistant to the president. At a later date he laid the groundwork and brought into being the economic development and research department of the company.

• The appointment of **James H. Graham of Tulsa** as director of PAW's natural gas and natural gasoline division in the Southwestern area, and of **Louis I. Mistrot,** formerly of Louisiana, as his assistant, was announced recently. Graham has been assistant director of the division since June, 1944, and Mistrot has been senior analyst of the division.

• **R. C. Duncan** is the newly appointed general manager of the Illinois Gas Co., Lawrenceville, Ill., succeeding **Charles E. Cook,** who resigned to enter another field of business.

Prior to coming to the Illinois company, Duncan was manager of the Gas Utilities Co. in Robinson, Ill., which is a branch office of the Illinois Gas Co.

• **Brig. James Jefferson,** a veteran of the Sicilian, Italian and northwestern Europe campaigns, and in civil life an executive of Northwestern Utilities in Edmonton, Alberta, Canada, has been recalled to Canada to assume command of a large training formation in connection with Canada's participation in the Pacific war, according to an announcement recently made from Defense Headquarters in Ottawa.

• **L. L. Feree,** president, general manager and director of the Gulf Public Service Co., Inc., New Iberia, La., resigned and has retired from active service under a provision of this company. He has been identified with the company for 15 years.

C. J. Schexnayder will succeed Feree, assuming the title of general manager and vice president. Schexnayder has been associated with Gulf since 1926.

• **E. K. Hartzell** for a number of years associated with various utility properties of Cities Service Co., has been named assistant to the president of the Cities Service Gas Co., with headquarters in Oklahoma City.

Hartzell will direct the company's public and employee relations program and, among other duties, supervise publicity, advertising and personnel activities.

Formerly a newspaper man, Hartzell has been connected with utility companies in Colorado, Ohio and Virginia since 1922. He served as president of the Public Utilities Advertising Association in 1938-1939.

• **Laurance S. Reid,** formerly assistant chief engineer for the Southern Natural Gas Co., has been appointed Professor of chemical engineering for the College of Engineering at the University of Oklahoma, according to a recent announcement by **R. L. Huntington,** chairman, School of Engineering.

L. S. Reid

Reid's duties will be divided between teaching and research. At present he is making studies on natural gas dehydration and other problems dealing with the production, gathering and processing of gas-condensate mixtures at high pressures.

• The appointment of **C. Leroy Elliott** as supervisor of the heating and air-conditioning engineering division of the Cincinnati Gas & Electric Co. was announced recently by **Edwin R. Rothert,** departmental manager.

Elliott started with the company as a draftsman in 1933. The division he now heads handles engineering work in connection with new gas heating installations, which are now restricted by governmental order. Inquiries concerning the use of gas for heating are referred to his division for handling in accordance with WPB orders.

• **E. C. Aldridge,** formerly head of the transportation department of the operating division of United Gas Corp., has been transferred to the Shreveport general office following his appointment to superintendent of transportation for the company and all of its subsidiaries.

Aldridge, who joined United Gas in 1937, was previously employed by the Carolina Power and Light Co., of Raleigh, N. C.

Kern and Merkle

• **J. E. Kern,** general supervisor of appliance and dealer sales of the Southern California Gas Co., Los Angeles, has resigned to enter the appliance distribution and retailing business, according to an announcement by **W. M. Jacobs,** general sales manager.

Kern, who entered the employ of Southern California Gas Co. in 1926 as industrial gas sales engineer, will be actively associated with the Ralph L. Stowers organization in Pasadena, Calif., a firm which retails Servel gas refrigerators and other gas appliances.

J. G. Merkle, now general supervisor of market analysis and promotion, will combine his present duties and responsibilities with those formerly undertaken by Kern.

•**L. F. Babcock,** assistant chief engineer of the Arkansas Natural Gas Corp. and subsidiaries, will assume the executive duties formerly executed by **H. T. Goss,** recently elected vice president and chief engineer of all Arkansas companies.

P. J. Erickson, Jr., has been promoted from a member of the engineering department to the position of engineer in charge of the general engineering department.

The announcement of both of these promotions was made recently by **A. H. Weyland,** vice president and general manager of the corporation.

• Effective July 1, the following changes were announced by **E. E. Stovall,** superintendent of gas measurement for Lone Star: **R. O. Cox** has been promoted from chief measurement engineer to office supervisor of measurement. **R. M. Scofield** has been promoted from chief meter inspector to field supervisor of measurement. **R. F. Downey** from special inspector to assistant field supervisor of measurement.

• **Patricia A. Galligan** has been appointed home service director of the New Haven (Conn.) Gas Light Co. She succeeds **Cornelia Newton,** who has been with the company for 14 years.

Before becoming associated with the New Haven Utility, Miss Galligan was with Swift & Co., Chicago.

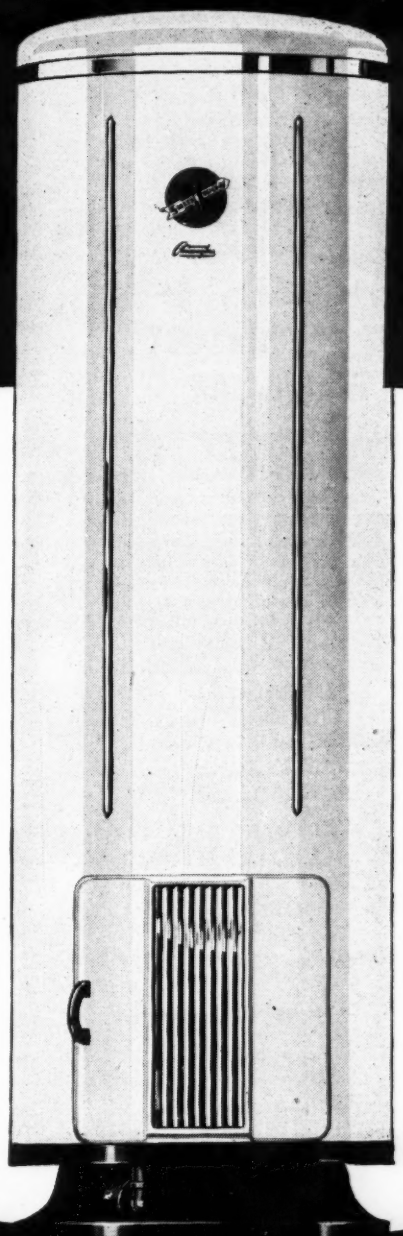
• **A. H. Weyland,** vice president and general manager of the Arkansas Natural Gas Corp., was elected vice president and a member of the finance committee of the Louisiana-Arkansas division of the Mid-Continent Oil and Gas Association at a recent meeting.

Subterranean Tests *Prove* Permaglas Protects

THOUSANDS of specimens of glass-fused-to-steel were buried in earth of all types from all states, to guide A. O. Smith engineers through 23,000 test-years in developing *Permaglas* . . . the sparkling blue, mirror-smooth glass exclusive with SMITHway Gas Automatic Storage Water Heaters.

No other water heater offers *Permaglas* advantages. There is no substitute for the long years of research and testing, devoted to the development of *Permaglas.* Chemical and metallurgical engineering experience, exhaustive research in glass, long production experience, special machinery, new processes and facilities, available nowhere else except in the huge A. O. Smith plants, contribute to *Permaglas* success. It assures hot water as clear and pure as the original water supply itself, *always.*

To help you sell more of these modern, long-life, gas water heaters, write for "The Inside Story of *Permaglas*" —a great aid to sales.



"Heated with Gas, Stored in Glass"

A. O. Smith Corporation,
Dept. GA445H, Milwaukee 1, Wis.

Please send me a copy of "The Inside Story of *Permaglas.*"

Name.....

Title.....

Company Name.....

Address.....

SMITHway Permaglas
GLASS LINED
TRADE MARK REG. U. S. PAT. OFF.

• The appointment of **Edward R. Thatcher** of San Francisco, as assistant director of the Petroleum Administration for War's Materials Division was announced recently by **Ralph K. Davies,** deputy petroleum administrator.

Thatcher, who will handle foreign materials requirements, was promoted from the position of director of materials for the East Coast states. He is succeeded in the latter post by **George Frederick Will,** of the Shell Oil Co., New York City.

• **Crad Brazel** has been elected assistant controller of the Philadelphia Co. and subsidiary companies of Pittsburgh, to fill the vacancy caused by the death of **John F. Davis** on June 24.

Brazel has been employed by various standard gas and electric company properties over a period of years. He joined the Philadelphia Co. in 1936 as special accountant. He was made general auditor for the companies in 1939, which position he held until his recent election to assistant controller.

• **Lt. Col. Robert A. Hornby,** vice president and a director of the Pacific Lighting Corp., San Francisco, will return to civil life after more than 39 months service with the army air forces. Hornby entered active duty in April, 1942, and served at headquarters, AAWFTC in Santa Ana, Cal., and headquarters, Army Air Forces, Washington, D. C.

R. A. Hornby

Le Roy M. Edwards and **Hornby** were elected directors of the Pacific Lighting Corp., San Francisco, succeeding **A. B. MacBeth** and **Alfred Sutro,** deceased. Edwards is vice president and general manager of the company.

• **Henry Fink,** vice president and general manager of the Detroit district of the Michigan Consolidated Gas Co., has announced the following appointments in that district:

L. G. Kreuz was appointed assistant general manager of the Detroit district; **L. K. Richey** was appointed assistant to the general manager of the Detroit district; **L. G. Wiseley** was appointed superintendent of purchases and supplies, assuming the duties relinquished by **William G. Boley,** who retired from that position last May 31; and **Frank J. Hall** was appointed superintendent of distribution plant.

• **Hoyt W. Gale, Jr.,** has been appointed manager to head up the newly organized personnel department of the Delaware Power and Light Co., Wilmington.

• **Lt. Colonel Whitney Stone** has been elected president of Stone & Webster, Inc., succeeding **George O. Muhfield,** who becomes vice chairman.

Stone first joined the company in 1930, and became an executive vice president in 1936. He resigned his position and directorship in 1942 to join the army ordnance department, and prior to his recent release by the army he was deputy district chief of the Boston ordnance district.

Muhfield has been associated with the company for more than 40 years and has served as president since 1931.

• **Rex V. Campbell** has been promoted from mechanical engineer to assistant superintendent of transmission compressor stations of the Panhandle Eastern Pipe Line Co. His headquarters will continue to be in the Kansas City office.

Campbell was employed for eight years by the Cities Service Gas Co., before joining Panhandle Eastern.

• **Charles V. Shannon** has resigned from the Federal Power Commission as general counsel, to return to the private practice of law in Washington, D. C. Joining the legal staff of the Commission in 1938 Shannon became general counsel in 1942.

GAS LABORATORY TECHNICIAN

Want man with experience in combustion of automatic fuels, primarily gas. Familiar with laboratory technique, especially operation of gas calorimeter and orsat analysis. Prefer graduate mechanical engineer, with knowledge of testing water heaters and boilers. Splendid postwar future. State experience and salary desired. Write Box 730, GAS, 1709 W. 8th St., Los Angeles 14, California.

Gas Combustion and Control Equipment

•

THE WEBSTER ENGINEERING COMPANY

Tulsa, Oklahoma

•

Consulting Engineers and Manufacturers

Division of

SURFACE COMBUSTION

TOLEDO, OHIO

Manufacturers

• **J. W. Ashby,** who has been serving as Pacific Coast manager of engineering of the Janitrol aircraft division of Surface Combustion Corp., has returned to the Columbus, O., plant of the company as manager of application engineering. Before the war, Ashby was district manager of space heating for Surface Combustion in the District of Columbia and Baltimore area.

Also returning to the Columbus plant from Los Angeles, where he was application engineer on aircraft heaters, is **G. P. Mandel.** In his new duties, he will work with Middle Western aircraft manufacturers on the application of Janitrol heaters to military vehicles and planes.

Burton M. Sharpe, who has been in the aircraft heater design engineering division at Columbus as a project engineer, is replacing Mandel on the West Coast.

• **Robert H. Gardner** has been appointed general manager of sales of A. M. Byers Co., President **L. F. Rains** announced July 27. Gardner has been manager of Byers' Washington office since 1933, except for a four-year period ending in 1940 during which he was manager of the company's steel pipe sales, with headquarters in Pittsburgh. He takes over the duties of the late Myron J. Czarniecki, who died June 18. Prior to coming with Byers, Gardner was assistant sales manager of Caterpillar Tractor Co.

At the same time, the appointment of **H. R. Rowland** as assistant general manager of sales was announced. Rowland joined the company's sales department in 1915. In 1925 he became manager of the Pittsburgh division, and in 1944 was named manager of hot rolled sales.

• **D. M. Kagay** has been named sales manager of gas equipment for the heating division of Gar Wood Industries, Inc., Detroit, according to **Glen A. Bassett,** president.

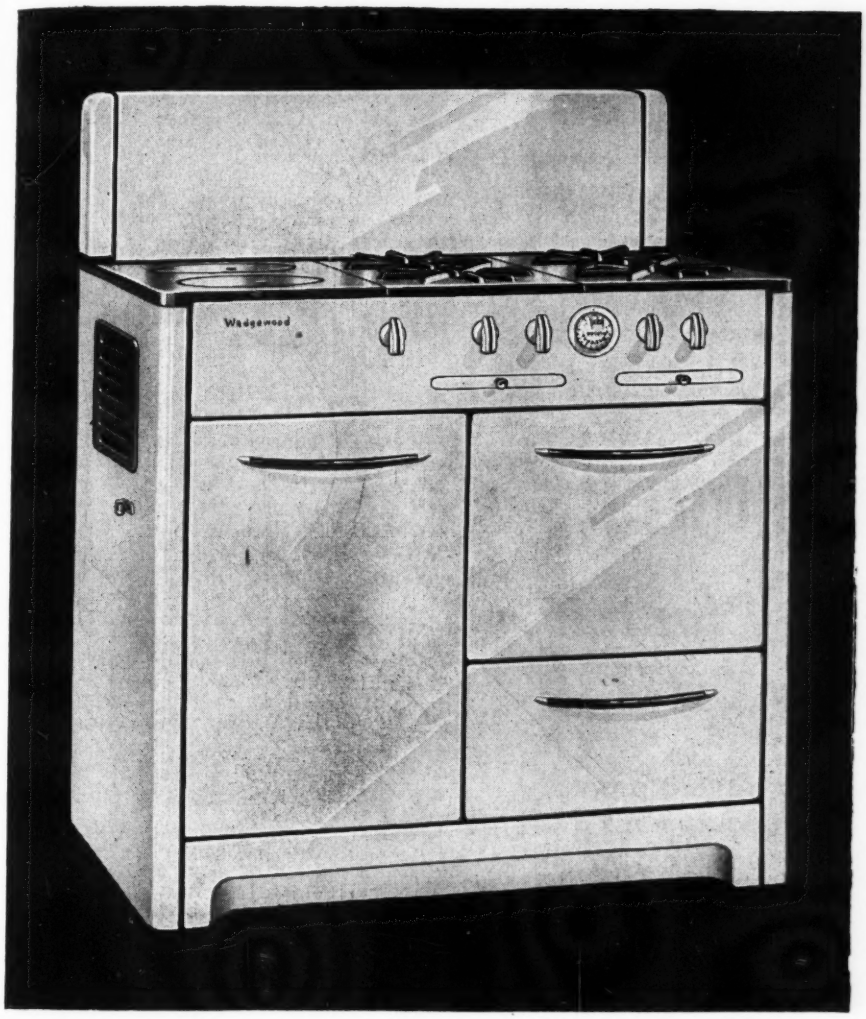
Kagey had formerly been the Gar Wood district representative in Michigan, Ohio, and Indiana from 1934 to 1942. During the past three years he was associated with a manufacturer of precision instruments for the Army and Navy.

• **D. A. Sillers** has resigned from his position as superintendent of gas measurement with Lone Star Gas Co., Dallas, to become president of the Peerless Mfg. Co., Dallas.

D. A. Sillers

A graduate of Carnegie Institute of Technology, Sillers spent four years as sales engineer for the Foxboro Co., and 20 years with Lone Star. During these years he developed the gravity balance, recording gravitometer, orifice meter slide rule, and the gas cleaner in general use in the industry. He

"And he's promised me a WEDGEWOOD . . . . "



"Now I KNOW I'll be a GOOD COOK!"

with Oven Heat Control

TO the home-makers of the West, **WEDGEWOOD** stands for ***quality performance.*** Women have confidence that baking, broiling or top-of-stove cooking on a **WEDGEWOOD** insures maximum results. That is why, since 1882, women have accepted **WEDGEWOOD** as their silent partner in home-making.

MODERNS PREFER GAS

FOR ALL GASES, INCLUDING LP (LIQUEFIED PETROLEUM) GAS

WEDGEWOOD THE MODERN GAS RANGE

JAMES GRAHAM MANUFACTURING CO.

LOS ANGELES ★ SAN FRANCISCO ★ NEWARK, CALIFORNIA ★ PORTLAND, OREGON

has been active in the development of present gas measurement practices and will be available as a consulting engineer on gas measurement problems.

Sillers has also developed the products of Peerless, which include separators for gas and oil, steam and air, natural gas odorizers, and a valve for shutting down pumping wells.

• **F. C. Packer,** general manager of Payne Furnace Co., Beverly Hills, Calif., has been appointed a member of the national advertising copy committee of the American Gas Association. Packer was nominated for the office by the executive committee of the manufacturers section of the Pacific Coast Gas Association.

• **Homer A. Size** has been named manager of the Immersion Heating Equipment Co., 2145 W. Washington Blvd., Los Angeles 7, distributors and manufacturers of immersion heating equipment, industrial gas burners, temperature controls, and specializing in the Dewey air flow system. Size was formerly manager of the heating division, Western Ornamental Iron Works.

• **Charles T. Miller** has been appointed manager of appliance sales, Baltimore district of Rheem Manufacturing Co., it was recently announced by **Frank J. Nugent,** general manager of appliance sales.

Miller will make his headquarters at 1401 Standard Oil Bldg., Baltimore, Md., and will be in charge of sales in the territory comprising the District of Columbia, Delaware, Maryland, Virginia, West Virginia, North Carolina and the northern portion of South Carolina.

Miller has been associated with Rheem since May, 1942.

• The appointment of **W. R. McLaughlin** as sales manager for the gas products division of Pittsburgh Equitable Meter Co., has been announced by **A. J. Kerr,** general sales manager. In his new position, McLaughlin will direct the sales for Emco meters, regulators, and allied equipment for measurement and control.

W. R. McLaughlin

McLaughlin's entire business career has been spent in the gas and oil industry. He became associated with the Arkansas Natural Gas Co. in 1919 and joined the Pittsburgh concern as a sales engineer in 1934. He is well-known for his work in furthering the interests of the Southwestern Gas Measurement Short Course. He has also served at various times on the gas meter committee of the A.G.A., and gas measurement committee of the API.

Kerr also announced the appointment of **A. G. Kirker** to the position of service engineer in Pittsburgh Equitable's Boston district office to operate under the jurisdiction of **F. C. Arens,** district manager. Kirker will handle the sale and service of both PEMCO-MERCO products in the state of Connecticut and in a section of Rhode Island.

• **Keith B. Miller,** general sales manager of the Tappan Stove Co., has announced the return of five Tappan field representatives to their prewar territories.

The five representatives and the territories they will supervise are: **Dan J. Thomas,** western half of New York state; **Chester A. Pridham,** state of New Jersey; **Homer W. Smith,** West Virginia; **Roy D. Oplinger,** Oklahoma; and **Harold E. Myers,** Louisiana.

• **V. C. Kneese** has been appointed manager of the Dallas factory branch of General Controls Co., Glendale, Calif. Kneese has had over 10 years' experience as purchasing agent and accountant in the wholesale plumbing and hardware business and with Associated Mechanical Contractors.

• **Irwin Rawson** has returned to the Stacey Manufacturing Co., Cincinnati, O., as vice president, after an extended leave of absence during which time he was affiliated with the ammunition branch of the Cincinnati Ordnance District Army Service Forces as chief of the fuse unit.

• The following appointments in Servel Inc.'s organization have been announced by **George S. Jones, Jr.,** vice president in charge of sales.

H. M. Wickman has been appointed

WARREN
LIQUEFIED PETROLEUM GAS

GAS MANUFACTURERS

Will Your Gas Plant "Pay Out" or "Play Out"?

Make your small city gas plant a paying proposition — don't let high cost of labor, equipment and maintenance for manufacturing gas keep you "in the red."

Plant operators can insure an excellent and dependable service for the present and postwar demand by converting with little expense to LP-Gas. The small additional plant investment, requiring a minimum of labor and equipment replacement, insures operation on a profitable basis.

While a large part of Warren's Liquefied Petroleum Gas is being used for critical war supplies, our greatly expanded facilities and production are adequate to supply your immediate needs.

Warren's trained organization will be glad to give you the benefit of its broad experience, engineering advice and consulting service without obligation.

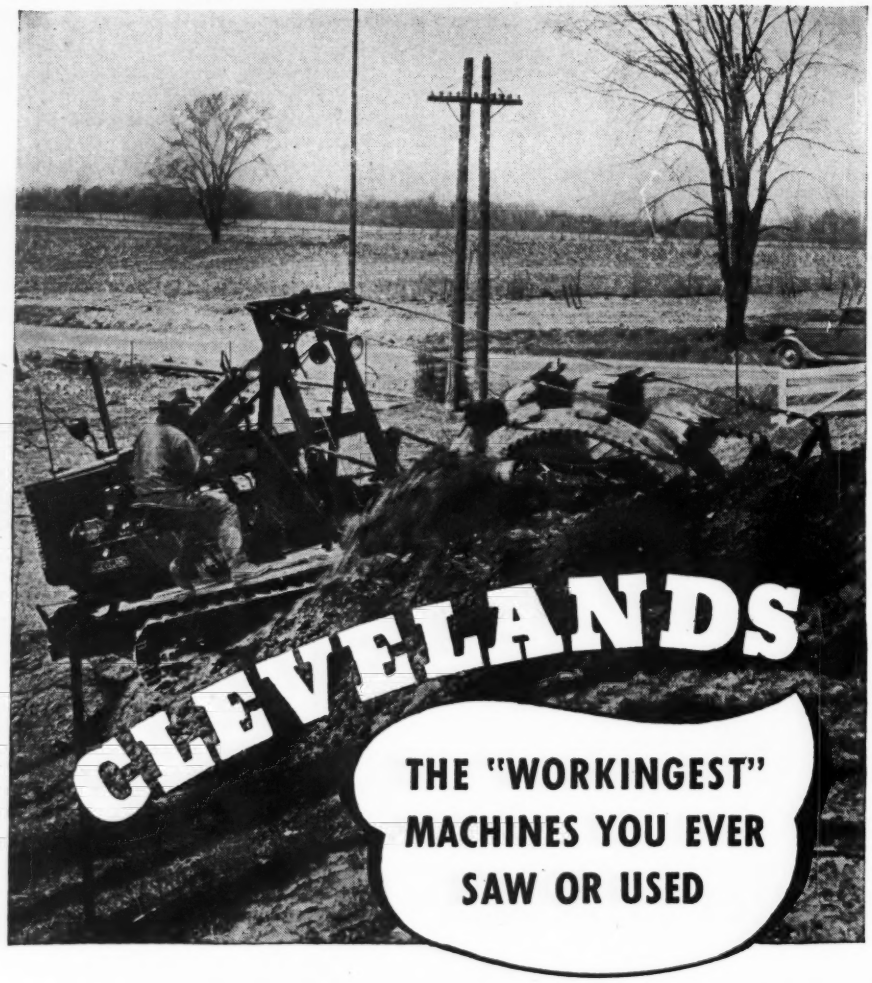
WARREN PETROLEUM CORPORATION
Tulsa, Oklahoma Houston, Texas

HOME APPLIANCES ARE GRADUALLY COMING BACK

Have you been nursing your old appliances? Or have you been doing without a needed mechanical work-saver, patiently waiting and hoping . . . ? You won't have to wait too long now. Home appliances are gradually coming back. If you desperately need some certain home appliance now or you plan to buy some new appliance next year, it would be wise to see your local appliance dealer. Drop in from time to time and see what he has. Tell him your wants and perhaps he can put you on his future list. And in the meantime, keep buying War Bonds and hold on to them.

P•G•and E•

PACIFIC GAS AND ELECTRIC COMPANY



CLEVELANDS . . . Modern, dependable, rugged and fast—represent the highest development in the full-crawler, wheel type trencher, pioneered by "Cleveland" more than twenty years ago.

A wide range and combination of digging and travel speeds, ample power for the toughest going in all kinds of soil and terrain, ease of handling, low fuel and operating costs and minimum times out for repairs, are some of the many practical advantages characteristic of Clevelands that assure you most completed trench at least cost on all your trenching jobs.

THE CLEVELAND TRENCHER COMPANY

20100 ST. CLAIR AVE. • CLEVELAND 17, OHIO

"CLEVELANDS" Save More . . . Because They Do More

SEMET-SOLVAY ENGINEERING CORPORATION

Blue Gas Plants	Gas Purifiers
Water Gas Machines	Condensers
Washer Coolers	Waste Heat Boilers
Naphthalene Scrubbers	Producer Gas Plants

40 RECTOR STREET, NEW YORK, N. Y.

H. M. Wickman

W. K. Grube

manager of sales, household refrigerator division. Wickham joined Servel in 1935 as sales promotion representative in Houston, Texas.

W. K. Grube has been appointed regional sales manager for Region C, which covers Tennessee, Georgia, Alabama, Florida, Missouri, and Kansas, and parts of Kentucky, Indiana, Illinois, Oklahoma and Mississippi. Grube was formerly a district sales manager for Servel and has been acting regional manager in this area during the war period.

J. C. Kellner has been appointed service manager, household refrigerator division. Since the death of P. V. Wiske, Kellner has been acting service manager of this division.

H. J. McFadden has been made district manager with headquarters in Oklahoma City, succeeding **Roy Weinman** in that territory.

Obituaries

• **John W. Batten,** president of the Michigan Consolidated Gas Co., died of a heart attack at the age of 65 July 1.

Batten came to work for the Detroit City Gas Co., predecessor of the Michigan Consolidated Gas Co., as an assistant in the laboratory. After serving the company in the following capacities, chief chemist, plant superintendent, superintendent of production, superintendent of distribution, engineer, assistant general manager and vice president and general manager, he became president in 1944, succeeding William G. Woolfolk, who was made chairman of the company.

• **Louis Stockstrom,** 86, chairman of the board of directors of American Stove Co., died July 5 in St. Louis.

He began his career as a stove manufacturer in 1882 with the Quick Meal Stove Co., which eventually became the American Stove Co. He was elected president of the company in 1927 and directed the company affairs until 7938, when he was succeeded by his son, Arthur Stockstrom.

• **William F. Raber,** retired president of the San Diego Gas and Electric Co., San Diego, Calif., died suddenly at his home on June 18.

Raber came to the company in 1924 as vice president and general manager and in 1931 he was elected president, which position he held until his retirement in 1941.

• **J. E. Black,** 32, assistant superintendent of the gas department of Central Arizona Light and Power Co., Phoenix, was drowned July 4 while on a fishing trip at Lake Pleasant, near Phoenix.

THE NEW FREEDOM GAS KITCHEN
featuring a fine ROPER GAS RANGE

Tomorrow's stream-lined homemaker, wherever she may be, will demand the type of modern gas equipment that will keep pace with her thinking — gas equipment like the ROPER GAS RANGE shown above.

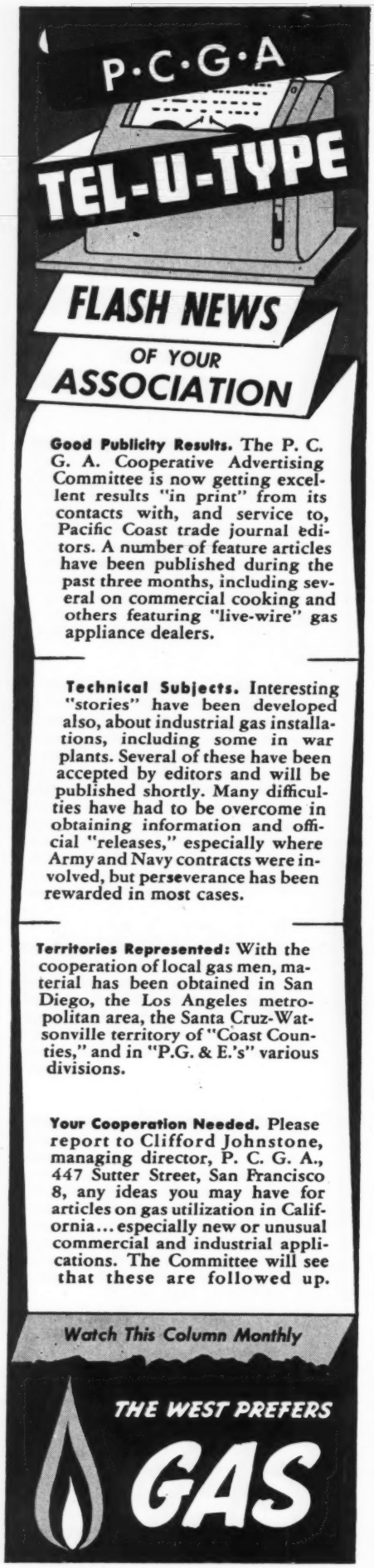
Here, she'll agree, is the ultimate in a fine cooking appliance, combining beauty . . . speed . . . economy . . . flexibility . . . the assurance of full-flavor foods done to perfection.

Roper offers to you a gas range that you can sell with pride, realizing full well that Roper's 60 years of manufacturing know-how supply a solid background for recognizing customer desires and answering those desires in a progressive practical manner.

ROPER
GAS RANGES

GEO. D. ROPER CORPORATION, Rockford, Illinois, Manufacturer of ROPER, *"America's Finest Gas Range"*, designed for use with all gases, including L.P. (Liquefied Petroleum) gas.

Offices and Warehouses in Atlanta - Boston - Chicago - Cincinnati - Cleveland Dallas - Denver - Los Angeles - Oakland - Philadelphia - Pittsburgh - Portland


P·C·G·A
TEL-U-TYPE
FLASH NEWS
OF YOUR
ASSOCIATION
Good Publicity Results. The P. C. G. A. Cooperative Advertising Committee is now getting excellent results "in print" from its contacts with, and service to, Pacific Coast trade journal editors. A number of feature articles have been published during the past three months, including several on commercial cooking and others featuring "live-wire" gas appliance dealers.
Technical Subjects. Interesting "stories" have been developed also, about industrial gas installations, including some in war plants. Several of these have been accepted by editors and will be published shortly. Many difficulties have had to be overcome in obtaining information and official "releases," especially where Army and Navy contracts were involved, but perseverance has been rewarded in most cases.
Territories Represented: With the cooperation of local gas men, material has been obtained in San Diego, the Los Angeles metropolitan area, the Santa Cruz-Watsonville territory of "Coast Counties," and in "P.G. & E.'s" various divisions.
Your Cooperation Needed. Please report to Clifford Johnstone, managing director, P. C. G. A., 447 Sutter Street, San Francisco 8, any ideas you may have for articles on gas utilization in California... especially new or unusual commercial and industrial applications. The Committee will see that these are followed up.
Watch This Column Monthly
THE WEST PREFERS
GAS

PIPELINE NEWS

• **The Natural Gas Pipeline Co. of America** and **Texoma Natural Gas Co.**, operated as one business with headquarters in Chicago, filed joint application with the FPC for authorization to extend and enlarge their existing natural gas transportation system. The two companies seek authority to enlarge their natural gas delivery capacity from the present 268,000,000 cu. ft. per day to 349,000,000, an increase of 81,000,0000 cu. ft.

The applicants propose to spend about $18,000,000 for compressors, pipelines and other equipment of which the principal items are as follows:

Texoma Co.—four 1250 hp. engines at its Station No. 22 in the Panhandle field, increasing the installed compressor capacity to 9000 hp.; enlargement of the dehydration and natural gasoline plant facilities at Station 22; and construction of 25.86 miles of 26-in. pipeline paralleling its present 24-in. pipeline along the northerly portion of its transportation system.

Natural Co.—loops or additional sections of pipeline parallel to its original 24-in. pipeline, where such loops are not now installed, totaling 286.48 miles of 26-in. line; 52.27 miles of 24-in. line on the northern end of the system; the completion of a 20-in. line extending 19.75 miles north of Belvidere, Ill., by the installation of two railroad crossings; and the construction of laterals.

• The Federal Power Commission has authorized **Northern Natural Gas Co.**, Omaha, Neb., to construct, at an estimated cost of $2,022,724, and to operate one additional 1300 hp. compressor unit at each of its Bushton and Mullinville, Kans. compressor stations; approximately 15 miles of 24-in. loop pipeline extending northeast from a point in Ellsworth county, Kans., to a point in Ottawa county, Kans.; and a dehydration plant at the company's Sublette compressor station in Seward county, Kans.

Northern Natural states that the proposed facilities would increase the delivery capacity of its system by about 8,000,000 cu. ft. of natural gas a day during the 1945-46 heating season. This will enable the applicant to supply the additional demands upon its system by existing gas distributors. In turn the distributors will supply an estimated 7000 additional domestic and commercial space-heating customers.

The proposed natural gasoline and dehydration plants are to replace an existing gasoline plant near Hugoton, Kans., which is inadequate because of its limited capacity.

• **Cities Service Gas Co.**, of Oklahoma City, has been authorized by the FPC to construct and operate: (1) 48 miles of 16-in. natural gas pipeline from the company's present facilities in the Burbank field near Shidler, Okla.; to the company's Caney compressor station in Montgomery county, Kans.; (2) 6.4 miles of 16-in. line interconnecting the company's Altoona and Vilas lines in Wilson county, Kans.; and (3) additional minor facilities at the company's Grabham compressor station, Montgomery county, Kans., and at the company's Petrolia compressor station, Allen county, Kans.

The new facilities, estimated to cost $1,204,478, will enable the company to increase its over-all system deliveries by 11,922,708,000 cu. ft. per year. All of the additional gas will be delivered to existing customers.

• The Federal Power Commission will hold a public hearing October 15, on **Metropolitan Eastern Corp.'s** application for authority to construct and operate approximately 825 miles of 18-in. natural gas transmission pipeline extending northeasterly from the Carthage Field, Panola county, Texas, to a point near Hamilton, Ohio.

The pipeline, with appurtenant facilities, including five compressor stations having an aggregate of 25,600 hp., and a dehydration plant, is estimated to cost $23,500,000. The project would have an initial daily capacity of 140 million cu. ft. of gas, intended to be sold to distributing companies in Ohio.

Metropolitan Eastern is a new corporation, organized under the laws of Delaware.

• The Federal Power Commission has authorized the **Kansas Power and Light Co.**, Topeka, Kans., to construct and operate 26 miles of natural gas pipeline in Pratt and Barber counties, and a dehydration plant in Barber county, Kans. The facilities will become an integral part of the company's natural gas system and will be operated for the transportation and sale of natural gas from the Lake City field in northeast Barber county to assure maintenance of adequate service to existing customers, the order states.

• The Federal Power Commission has authorized **United Gas Pipeline Co.** to construct at an estimated cost of $7,261,221 a 24-in. pipeline extending east 143 miles from the Carthage field in Texas to a point of connection with the **Tennessee Gas and Transmission Co.'s** existing 24-in. line at Monroe, La. From there the line will connect with United's existing facilities in the Monroe gas field through 4½ miles of 18-in. line beginning at the Chicago Corp.'s gasoline plant in the Carthage field.

• The Federal Power Commission will hold a public hearing August 15 on **Kansas-Nebraska Natural Gas Co.'s** application for authority to: construct and operate about 20 miles of 12¾-in. transmission pipeline to reinforce the company's present pipeline system in Phillips and Rooks Counties, Kans.; install two 1000 hp. compressor units and auxiliary equipment at its compressor station near Scott City, Kans.; and move a 250-hp. compressor station now located at Elm Creek, Neb., and reconstruct it near Holdredge, Neb. Cost: $410,000.

• The Federal Power Commission announced that it had (1) granted the **Reynosa Pipe Line Co.**, Corpus Christi, a rehearing on its application to export up to 60,000,000 cu. ft. of natural gas a day from Texas to Mexico; (2) consolidated Docket No. G-595 with Docket No. G-594, the company's application for authority to construct and operate facilities to be used for exporting the gas; and (3) ordered the consolidated hearing for Oct. 3, 1945, in Washington, D. C.

FLOOR FURNACE FACTS . . . NO. 1

What is a WARD FLOOR FURNACE ?

THE WARD FLOOR FURNACE is permanent gas heating equipment that becomes a permanent part of the building in which it is installed.

The Ward is built in one sturdy "complete package." Furnace, register, controls and accessories are combined in a single unit.

It takes less than a day to install a Ward and have it ready for use. The furnace is dropped into a floor opening and hooked up to a vent and gas line. That's all there is to it. No basement is needed. No wires to run . . . *one trip installation.*

Ward has been manufacturing floor furnaces for 36 years. Over 350,000 of them have been installed in homes, one-story apartments, stores, offices, factories and other buildings.

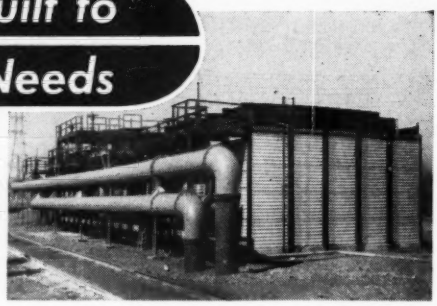
When furnaces are again available, sell gas-operated Floor Furnaces. Sell the reputation of a Ward that's backed by more than a third of a century of dependable performance.

36 years of "KNOW-HOW"

WARD HEATER COMPANY

1800 WEST WASHINGTON BOULEVARD • LOS ANGELES 7, CALIFORNIA

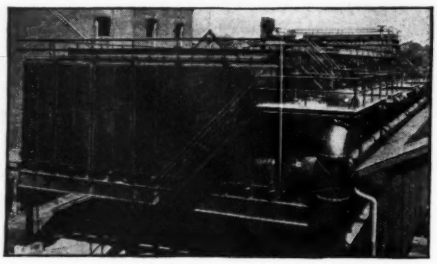
Designed and Built to YOUR Specific Needs

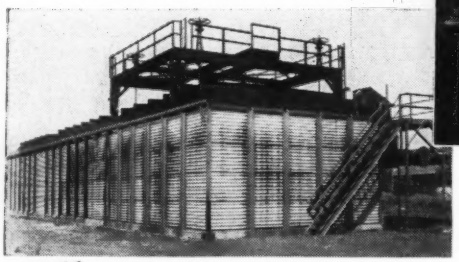


We design, construct, and install all sizes and type of Oxide Purifiers; either round, rectanguular, elevated, or ground level—including piping and valve arrangement for any desired flow.

The photos show typical Purifier Box installations designed, manufactured, and erected by Stacey Brothers.

Consult with us NOW—if you are contemplating the purchase of Purifier Boxes. It will facilitate earliest possible erection as soon as materials are available.





The STACEY BROS.
Gas Construction Co.
One of the Dresser Industries
5535 VINE STREET
CINCINNATI 16, OHIO

Purifier Boxes

Stacey Brothers ENGINEERS · FABRICATORS ERECTORS · RECOGNIZED EXPERIENCE & FACILITIES

GAS METER INDEXES AND FITTINGS

Many Standard Meter Parts Carried in Stock

We will be pleased to submit quotations to your specifications and blueprints.

THE E. F. GRIFFITHS CO.

346 E. Walnut Lane **Philadelphia 44, Penna.**

New Gas and Water Co. To Be Formed in Indiana

The Indiana Gas and Water Co., Inc., headed by Louis B. Schiesz of Indianapolis, as president, has petitioned the Public Service Commission of Indiana for authority to purchase the gas and water utility properties hitherto operated by Public Service Co., of Indiana, Inc.

The Securities and Exchange Commission has already approved the separation of gas and water from the electric utilities operated by Public Service, and the latter company's petition for its sale of these utilities to the new company is now pending before the Indiana commission.

Schiesz said that operating personnel for the new company will be recruited largely from the ranks of experienced men in Public Service. His concern, he added, will undertake the continued improving service and supplies in water and gas, at the lowest rates consistent with cost and taxes.

The new company will take over service to some 59,000 gas users, whose bills grossed more than $3,250,000 last year. It is expected that general headquarters of the new company will be located in Indianapolis.

Rucker-Vaughn Expands Plant Facilities

The expansion of plant facilities and consolidation of sales offices by Rucker-Vaughn Co. in Oakland, manufacturers of the Vaughn line of pressure regulating valves and gas and oil burning equipment, as well as the Arnold lubricator, an air tool specialty, has been announced by Clark E. Rucker, who is in charge of sales.

The company has stepped up its production capacity, both through plant expansion and improved production methods, according to Rucker. The new developments include an improved service department for the complete rebuilding of used valves, and full valve maintenance service. Production is headed up by Clifford Vaughn.

Electric Energy from Wind Is Topic of FPC Report

The FPC has announced its issuance of a staff report, prepared by Percy H. Thomas, presenting the preliminary results of a survey undertaken to determine the potentialities of the wind as a source of electric energy. A limited supply of the 74-page report is available for public distribution.

The investigation was based on a study of the records of the weather bureau, which show wind-velocity readings taken at all times of the day and night and throughout the year at hundreds of stations scattered over the country.

Illinois Institute Offers Engineering Scholarships

Three individual scholarships have been made available to engineering students at Illinois Institute of Technology by the John Morse Memorial Foundation, according to an announcement by Dr. Henry T. Heald, president of the Institute. The scholarships each will be in the amount of $500 for a two-semester academic year and will be awarded to students of outstanding scholastic attainments, character, and personality.

7 leading magazines are carrying the story of the Postwar *Magic Chef*

THE combined power of these magazines is working in your behalf. They are telling millions of prospects the story of the Postwar Magic Chef as the heart of the New Freedom Gas Kitchen.

You can help yourself to your share of the business resulting from this national advertising by tying in with the Magic Chef Kitchen program in your own store. The May issue of Magic Chef Magazine announced a new and complete program of kitchen promotion. If you didn't get your copy, be sure and write at once to your nearest American Stove office. Available in this program: Broadsides, complete newspaper ads, and four truly beautiful six-color kitchen enlargements, size 20″ x 20½″ for display purpose.

Be sure to use all this material now, so you can cash in on American Stove Company's great national advertising program.

AMERICAN STOVE COMPANY
4901 Perkins Avenue • Cleveland, Ohio
NEW YORK • ATLANTA • PHILADELPHIA • CHICAGO • CLEVELAND
ST. LOUIS • LOS ANGELES

Magic Chef

RED WHEEL GAS RANGES
AND HEAVY DUTY GAS COOKING EQUIPMENT

Awarded to Quick Meal Stove Co. Division of American Stove Co.

The Symbol of "Certified Performance"

● Non-metallic Transite Flue Pipe not only is rustproof, it is light in weight . . . easy to install and support . . . can be cut to fit on the job. Neat and attractive in appearance, it needs no painting. 2" to 12" sizes; round and oval. Complete line of fittings and accessories.

For details, write for booklet TR-13A. Johns-Manville, 22 East 40th Street, New York 16, N. Y.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville **TRANSITE FLUE PIPE** For venting gas-burning appliances

PAW Amends Five Wartime Restrictions

Ralph K. Davies, deputy petroleum administrator, PAW, has announced that the first steps toward opening the way for the petroleum industry to begin preparing to reconvert to a peacetime basis have been taken by amendments to five wartime restrictions. He stated that Petroleum Administrative Orders 11, 12 and 15 have been amended, effective July 14, and also called attention to simultaneous changes made by the WPB, upon recommendation of the PAW, in Limitation Order L-86, and Preference Rating Order P-98b.

Amendments to PAO-11 and PAO-15 remove previously existing prohibitions against construction of certain refining, transportation, natural gasoline and special production facilities. They also eliminate a restriction regarding duplication of gathering lines for natural gas or crude oil, this provision being deemed no longer necessary. It was emphasized, however, that it is desirable, because of the war requirements, to use materials for expanding rather than duplicating gathering facilities.

L-86, as amended, permits the use of up to $40,000 worth of materials in liquefied petroleum gas bulk plants but does not allow installation of liquefied petroleum gas equipment in these plants.

The PAO orders and L-86 as amended, limit the total cost of materials to be used in the construction of a building to $25,000 because of WPB restrictions on building materials.

Finances Voted For Tappan Postwar Expansion

Stockholders of the Tappan Stove Co. last month voted to authorize the issuance of 25,250 additional shares of stock to finance the firm's postwar expansion program.

Part of the funds will be utilized to purchase new equipment for increased production at Mansfield, Ohio, while the balance will be used to construct a new manufacturing plant in Murray, Ky., which may be operated by a newly formed corporation.

The new company will be managed by Robert M. Lamb, Tappan's Mansfield plant superintendent, and William R. Mabee, assistant plant superintendent, will replace Lamb. James S. LeMunyon will become assistant plant superintendent and in charge of the Portsmouth plant.

Consolidated Gas Establishes Scholarship As Memorial

The establishment of a scholarship fund as a memorial to its employees who lost their lives in the disastrous Cleveland fire last October 20, was announced July 24 by J. French Robinson, president of the East Ohio Gas Co.

Created by the Consolidated Natural Gas Co., the fund will be known as "The Consolidated Natural Gas System Educational Foundation." It will be administered by a committee of five executives selected from Consolidated and its affiliated companies, which include the East Ohio Gas Co.

Young people, whose father or mother died in the performance of duty while an employee of the company, will be eligible.

SKINNER Leak Clamps Saddles

M. B. SKINNER CO. SOUTH BEND, IND.

CLAMPS AND SADDLES FOR CAST IRON AND STEEL PIPE. STANDARD OF THE WORLD FOR NEARLY HALF A CENTURY

HUMPHREY

LEADS IN

Distinctive Design

Modern designing that anticipates tomorrow's styles, but tempered with the grace and beauty of earlier periods, makes every Humphrey Appliance a source of pride to the owner. Here are original, distinctive designs and carefully chosen color harmonies that conform with old or new home furnishings and remain in good taste for many years.

And beneath it all is the unseen but highly important functional designing that lends itself to sturdy, well balanced, long lasting construction and assures heating satisfaction of a high order.

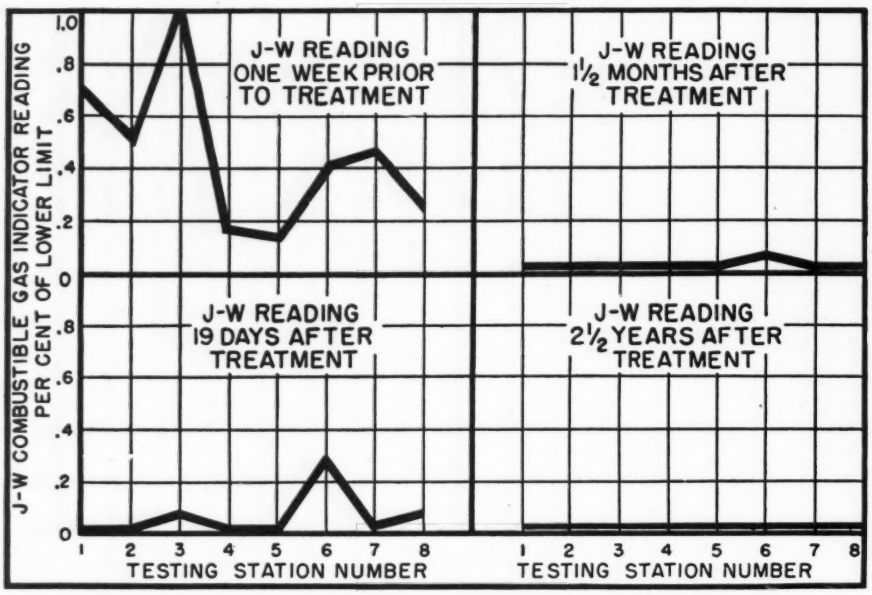
A HUMPHREY PRODUCT

REMEMBER THIS MARK OF QUALITY

GENERAL GAS LIGHT COMPANY KALAMAZOO, MICHIGAN

23 Warren St., New York City | 2nd Unit Santa Fe Bldg., Dallas | 225 Eleventh St., San Francisco

Actual Tests of Gas Leakage Show the Value of *Carboseal Anti-Leak*


J-W COMBUSTIBLE GAS INDICATOR READING PER CENT OF LOWER LIMIT
1.0
.8
.6
.4
.2
0
J-W READING ONE WEEK PRIOR TO TREATMENT
J-W READING 1½ MONTHS AFTER TREATMENT
J-W READING 19 DAYS AFTER TREATMENT
J-W READING 2½ YEARS AFTER TREATMENT
1 2 3 4 5 6 7 8
TESTING STATION NUMBER
1 2 3 4 5 6 7 8
TESTING STATION NUMBER

Notice how the graph shows that leakage from bell and spigot joints was materially decreased within nineteen days after treatment with Carboseal Anti-Leak. In one and one-half months leakage was almost completely stopped, and joints were still tight two and one-half years after treatment.

To learn more about how this effective low-cost treatment can be used in your gas distribution system write for the booklet, "Correcting Leakage in Gas Distribution Systems with Carboseal Anti-Leak." It will tell you how Carboseal Anti-Leak is applied, how much it costs, and what results can be obtained.

CARBIDE AND CARBON CHEMICALS CORPORATION

Unit of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York 17, N. Y.

"Carboseal" is a registered trade-mark of Carbide and Carbon Chemicals Corporation

CARBOSEAL *Anti-leak*

IT'S LIKE *writing* A LETTER HOME

These ads month after month . . . telling you that all of our production is going to war . . . are simply to remind you that the name to remember when you want real snap-acting gas controls after the war is

SPENCER THERMOSTAT CO.

KLIXON

ATTLEBORO, MASS.

Home Service Directors Avert Hospital Food Crisis

A food crisis in a Salem, Ohio, hospital was prevented recently by home service directors of two natural gas companies when the dietitian and head cook of the hospital quit without warning. Adding to the problem of feeding the patients and personnel of the institution was the fact that a newly appointed superintendent had not yet arrived to take over hospital supervision.

Miss Flora G. Dowler, home service supervisor for the Manufacturers Light & Heat Co., and its associated natural gas companies, hearing of the predicament, immediately dispatched two of her home service directors.

For three days the two directors, Mary Ellen Vick of the Natural Gas Co. of West Virginia and Camille Caldara, of the Manfacturers Light & Heat Co.'s East Liverpool, Ohio, office, planned trays for the patients, presided over the preparation of food, took inventories, made market orders and then wrote a memorandum to guide food selection and preparation for an additional 10-day period.

The emergency service rendered by these two home service directors not only helped the institute prevent a serious food crisis, but also paved the way for the new, permanent personnel to take over in a most efficient manner.

Dresser Industries to Acquire Security Engineering Co.

Security Engineering Co., Inc., Whittier, Calif., manufacturer of oil field tools and specialties, and the sole manufacturer of Securaloy, a patented metal for oilwell liners, will be acquired by Dresser Industries, Inc., Cleveland, O., according to a joint announcement by H. N. Mallon, president of Dresser and W. E. Seivers, executive vice president of Security.

The agreement has been signed by company officers, but is subject to the approval of the Commissioner of Corporations of California and Security stockholders. Acquisition of the company will further round out the activities of the 13 Dresser member companies now serving the petroleum and gas industries.

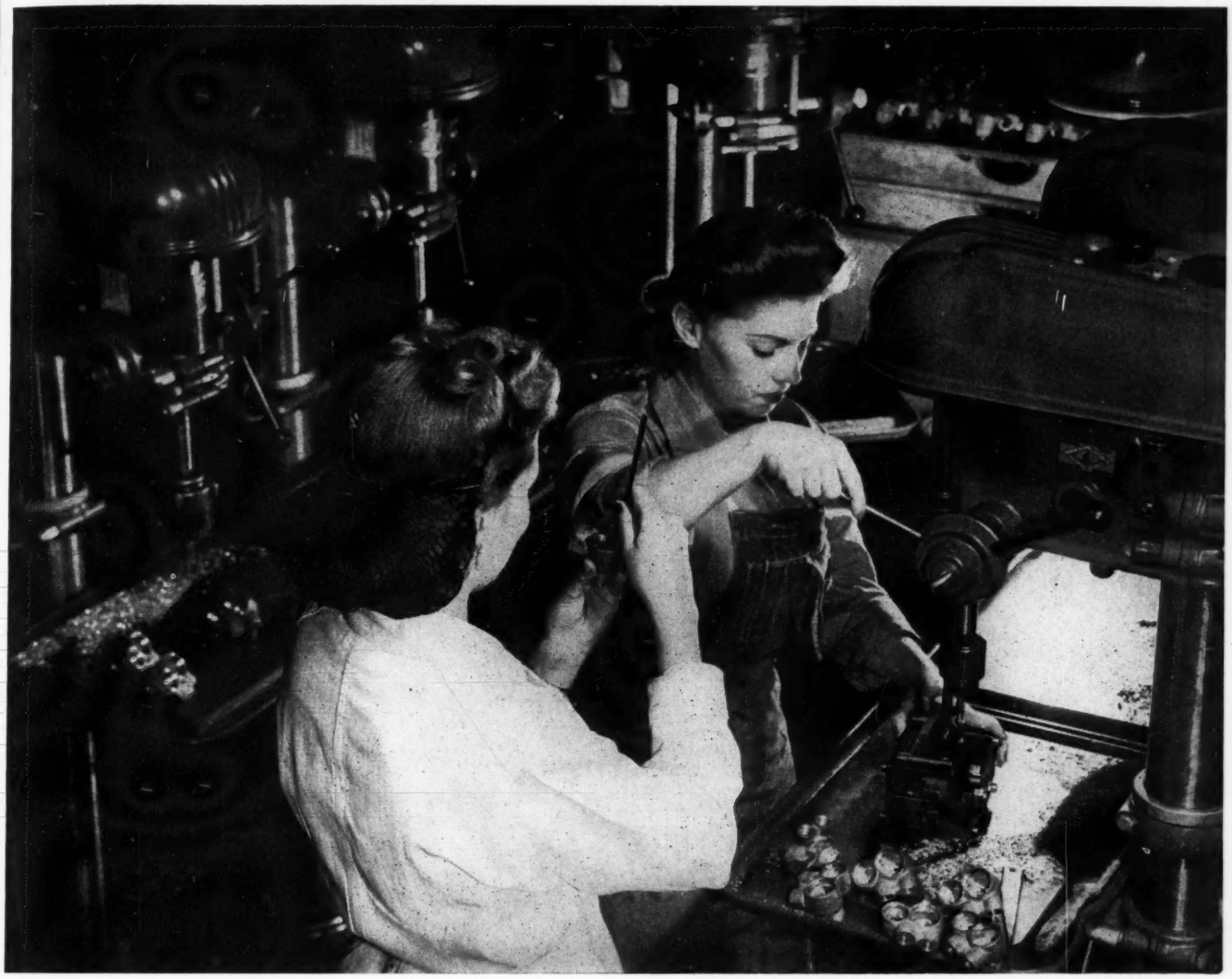
Southern Counties Offers Cooker Testing Service

In anticipation of the canning season, the district offices of the Southern Counties Gas Co., Los Angeles, are again ready to offer a pressure cooker gauge testing service to customers as a gratis wartime service, according to H. W. Geyer, utilization engineer. This service, inaugurated for the first time last spring, proved so popular that the company decided to make it available once more this year.

The testing procedure used by the company permits testing of the gauge without removing it from the pressure cooker or making any mechanical changes in the cooking appliance.

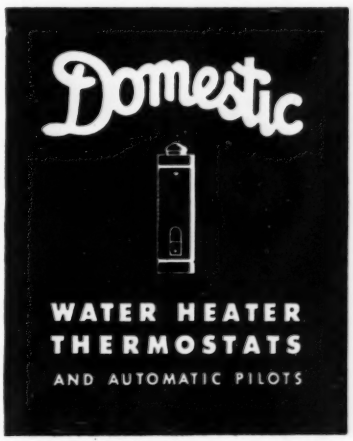
Lone Star Renames District

Julian L. Foster, superintendent and chief engineer for Lone Star Gas Co., Dallas, announced that as of May 9, the name of the portion of Lone Star System territory of operations designated as Oklahoma Pipe Line District is to be designated Fox District.



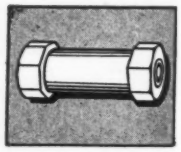
INSPECTION GOES HAND IN HAND WITH MACHINING AT DOMESTIC

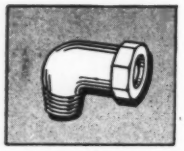
From the blueprint stage, through the machining, to the final assembly, each Domestic Thermostat has to meet rigid standards. Constant floor inspection – testing under operating conditions – insure uniform accuracy and dependability • When you sell a water heater that is equipped with a Domestic Thermostat, you know the customer is assured of many years of trouble-free thermostat service.

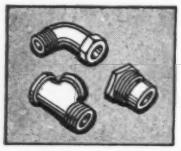


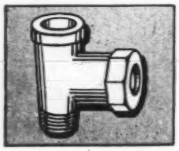
DOMESTIC THERMOSTAT COMPANY • 156 WEST PICO BOULEVARD, LOS ANGELES 15, CALIFORNIA

NORMAC COUPLINGS
SLEEVES AND FITTINGS
for maximum deflection, ease of "stabbing," complete confinement of the rubber!



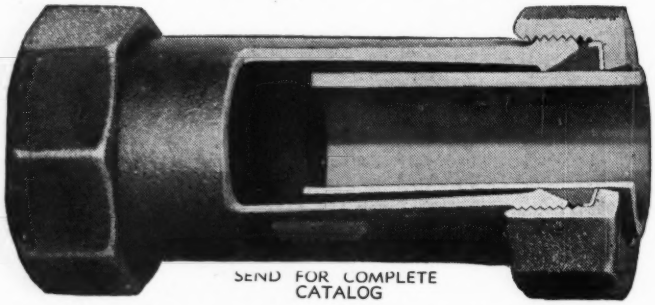






So close are "Normac" rubbers confined at the gasket tip that possibility of flow is reduced almost to "nil." These couplings, sleeves and fittings . . . approved by gas utility men across the country for their time-saving features, ease of handling and dependable service . . . are available in a complete range of sizes. Made from air furnace malleable iron they provide greater wall thickness than pipe on which used.

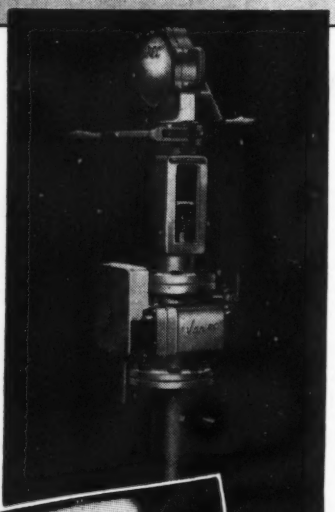
NORTON-McMURRAY
MANUFACTURING COMPANY
39 South La Salle St. Chicago, Ill.

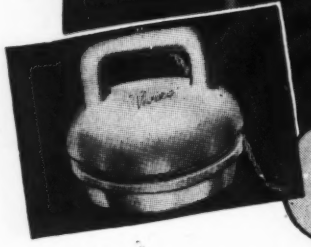


SEND FOR COMPLETE CATALOG

Couplings - Meter Bars - Sleeves - Cocks - Bell Joint Clamps - Service Tees & Ells

ACCURATE • GASTIGHT
"VAREC" approved HAND GAUGING and SAMPLING UNIT FOR PRESSURE STORAGE





"VAREC" approved Gastight Hand Gauging and Sampling Unit is used on all types of tanks for taking accurate gauges, temperatures, and spot or running samples without loss of tank pressure. Made of cast aluminum, semisteel or cast steel with bronze and Stainless Steel trim and tape, it is noncorrosive throughout. An adjustable quick release arm releases the neoprene-sealed coupling between the head and body. The sheave handle is equipped with a ratchet-stop held in place by a spring-loaded plunger. Thus, an automatic stop is provided at any desired level. In serving a group of tanks, blind heads with one or more portable heads, assure maximum performance with economy. The Sampling or Temperature Bomb is cadmium plated bronze and Stainless Steel trim. When sampling, a slight jerk on the tape opens or closes the valve. Thermometer is installed in mercury well.

The Pace Setter Since 1928

THE VAPOR RECOVERY SYSTEMS CO.
Manufacturers of Gas Control and Tank Equipment
COMPTON • CALIFORNIA
NEW YORK CITY • NEW ORLEANS, LA. • HOUSTON, TEXAS
TULSA, OKLA. • AGENCIES EVERYWHERE

CURRENT READING

Safe Practices in Gas Pipe Line Work—D. Attaway. "Petroleum Engineer," May, 1945, pp. 55-61. The purpose of this article is to compile from the experience of pipeline foremen, construction engineers, safety engineers, and experienced workers, the safe practices that will enlighten new workers and supervisors so that costly mistakes and serious injuries can be avoided. Such safe practices and procedures are the most generally accepted among the safety rules and regulations of various companies and organizations and are not to be confused with federal, state or city rules and regulations applicable to the operation of pipelines. As a compilation of experience in accident prevention, it should not be assumed that it includes every acceptable procedure in the field covered. Generally the procedures are intended to cover more directly the installation and operation of gas pipelines operating at normal pressures, although the practice may well aply to pipelines in any service.

Electronics—Its Application to Petroleum Technology—F. R. Staley. "Oil and Gas Journal," May 5, 1945, pp. 82-86, 116. The use of electronic apparatus by petroleum technologists has steadily increased in recent years. The mass spectrometer, the electronic microscope, the electronic spectrophotometer, the photoelectric pyrometer, and X-ray diffraction apparatus are used in petroleum testing and research laboratories. Also electronic control instruments have been installed in many plants to regulate processing conditions. Many devices developed by the radio industry are finding extensive application aside from communications, and after military restrictions have been eliminated, the phenomenal advances made in high frequency radio will be available to all industry.

Flexible Equalizer Kicks Off Dead Wells—"Oil Weekly," May 7, 1945, p. 61. Frequently a flowing well which has gone dead may be placed back on production, if means be at hand to use this power. One company, experiencing considerable difficulty with a number of wells in a block, devised a simple kick-off which effected substantial savings in time and money. As shown in a sketch the tubing and casing in a well are coupled together at the surface by a ⅜-in. copper tubing, which forms an equalizer connection between the pressure gauge cocks on the respective strings.

Kansas Sour Gas Economically Sweetened Through Small Plant. "Oil and Gas Journal," May 19, 1945, pp. 123, 125. First six months of operation have demonstrated the installation described to be both practical and economical. Capacity is 11,200,000 cu. ft. per day, and the amount of treating fluids lost is surprisingly small. The plant includes auxiliary equipment and power necessary for operation, and testing equipment.

Natural Gas, by F. S. Lott and H. Backus., U. S. Bureau of Mines. Chapter preprint from Minerals Yearbook, 1943.

Casing Methods for Well Completions—W. A. Sawdon. "Petroleum Engineer," May, 1945, pp. 242, 244, 246. In the development of oil and gas fields at the present time there are three different types of casing methods being generally used to protect the oil measures from water and to obtain the best production. These are: (1) the use of water strings and liners, (2) combination strings, and (3) gunperforated blank pipe cemented through the producing measures. Local conditions and regulations often dictate which method shall be used, but in many fields some variation is permitted. There are advantages and disadvantages of each method and, when there is a choice, these should naturally be considered when making a selection. In a discussion of this subject by a number of engineers in California the various factors influencing the selection of a completion method were examined. A summation of the conclusions drawn by one of the engineers is presented.

Mechanics of Producing Oil, Condensate and Natural Gas—P. J. Jones. "Oil and Gas Journal," May 5, 1945, pp. 103, etc., part 26. May 12, 1945, pp. 124, etc., part 27. May 19 1945 pp. 128, etc., part 28. May 26, 1945, pp. 139, etc., part 29.

BOOKS AND PAMPHLETS

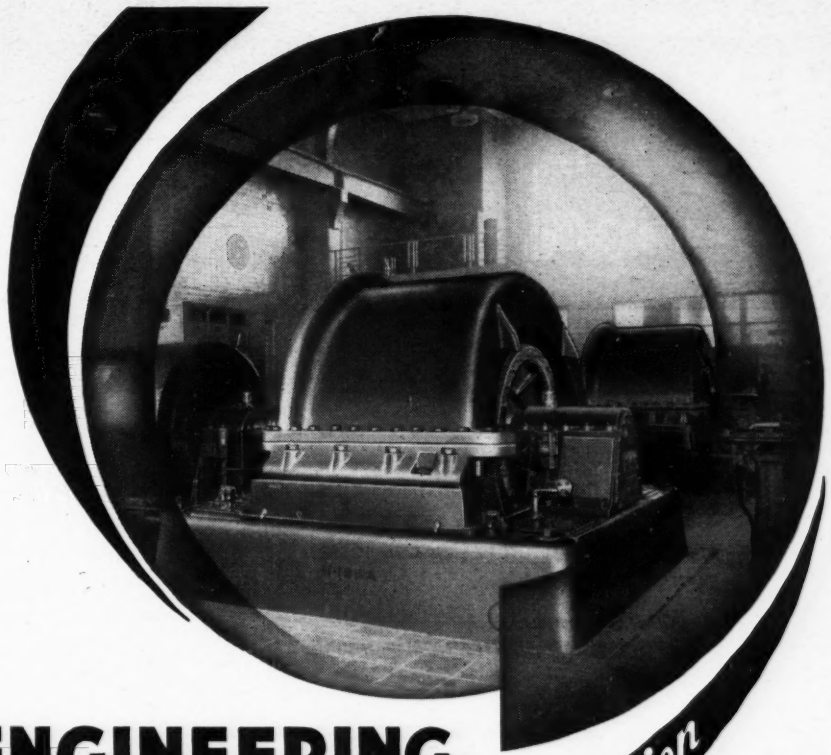
1943 Supplement Code of Federal Regulations, Book 1, Superintendent of Documents, Government Printing Office, Washington 25, D. C. This supplement is published in two books and is on sale at $3.00 per book. Book 1, now available, contains Titles 1-31, and includes in Title 3 all Presidential Executive Orders and Proclamations together with appropriate reference tables pertaining thereto.

Prices, Profits and Production, by Charles S. Davis, president, Borg-Warner Corp., Chairman, Committee on Inflation Control. This booklet is a summary of Davis' statement to the House Committee on Banking and Currency at its hearings on renewal of the Price Control Act. A mimeographed copy can be had on request to the National Association of Manufacturers, 14 W. 49th St., New York 20.

Developments and Status of Carbon Black by Isaac Drogin, director of research, United Carbon Co., Inc., Charleston, W. Va. Discusses the far-reaching changes in the carbon black industry in the last few years with regard to processes of manufacture, development of new types of carbon black, and the uses of carbon black in both natural and synthetic rubber.

Collective Bargaining, by John W. Scoville. This booklet is the reproduction of a talk by Scoville made before the Kiwanis Club, Detroit, Aug. 8, 1944. For copies, write to the Newspaper Statistical Service, Lafayette Bldg., Detroit 26.

How to Train Your Assistants, by Richard W. Wetherill. A pamphlet describing a tested method for all foremen, supervisors and department heads. Published by the National Foremen's Institute, Inc., Deep River, Conn. Price 25c.



ENGINEERING EXCELLENCE
from inception to installation

Photo shows three 3-stage "R-C" Centrifugal Blowers installed in a sewage treatment plant. Capacity of each, 15,000 CFM; pressure 7.75 lbs., speed 3,565 RPM.

When you invest in an "R-C" Centrifugal Blower or Exhauster, you will find that every detail of construction has been given engineering consideration. Design effort has been expended on each part to assure its proper functioning with all other parts, and thus make the whole a masterfully engineered job.

An investigation of Roots-Connersville Centrifugal Units in action will convince you that their highly efficient and smooth operation are the result of engineering excellence—from the inception to the installation of the unit.

APPEARANCE
may not tell the whole story

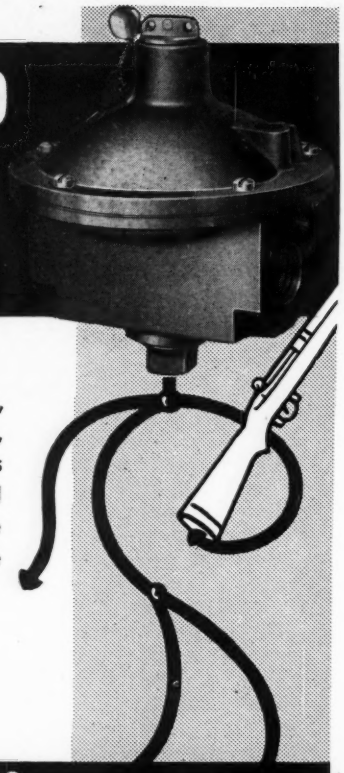
A watch with 7-jewel works in a cheaply-plated case may look, when new, just as good as a 21-jewel works in a solid gold case. The true value shows up in performance —and time is the test.

ROOTS-CONNERSVILLE BLOWER CORP.
One of the Dresser Industries
508 Oregon Ave., Connersville, Ind.

WRITE FOR BULLETIN 120 - B - 12

Roots CONNERSVILLE SINCE 1854 Centrifugal EXHAUSTERS and BLOWERS

STANDING GUARD
FOR
Economy



Precision engineered for sturdiness, long life, and trouble-free service, the H-M Low Pressure Regulator saves labor and money. Regulating and controlling your gas flow through the use of H-M Regulators you can solve your pressure problem.

Send for complete details regarding available sizes and specifications.

HM REGULATOR CO.
THERMO CONTROL CO.
800 EAST 108TH STREET
LOS ANGELES 2, CALIF.

For Tight, Flexible Joints Across Streams and Waterways USE MOLOX Ball-and-Socket PIPE

●

Where gas, oil, water and other liquids must be conveyed across streams, bays, swamps and sloughs unstable trench conditions make imperative the use of a pipe with flexible joints that remain bottle tight.

Such is Molox Ball-and-Socket Pipe, manufactured by the Mono-Cast Centrifugal method. The Molox Ball-and-Socket Joint permits assembly on a barge, or the pipe may be assembled at the shore line and floated across on pontoons. The extreme flexibility of the joint permits a deflection of 15°.

●

AMERICAN CAST IRON PIPE COMPANY
Birmingham 2, Alabama
Sales Offices in Principal Cities

WELSBACH
ENGINEERING
and
MANAGEMENT
CORPORATION

All phases of
GAS and ELECTRIC UTILITY
MANAGEMENT
CONSTRUCTION
APPRAISAL

E
WELSBACH
M

1500 WALNUT ST.
PHILADELPHIA 2, PA.

FPC Reports on Electric Rates in Annual Publication

The FPC has issued its 11th annual publication showing, in the form of typical net monthly bills, electric rates as of Jan. 1, 1945, for residential, commercial light, commercial power and industrial service in 204 U. S. cities having population of 50,000 and more. Based on the population of these cities plus the population of communities served under identical rates, the data presented are applicable to about 75% of the electric customers living in communities of 250 population and more.

Significant comparisons with rates charged in prior years are included in the report. These comparisons show that downward trends in electric rates have continued for residential and commercial services, and that all except three of the cities had reductions since 1935 in one or more of their typical bills for residential service. For industrial service the average typical bills fell below those for the prior year for the first time since the downward trend was reversed in 1941 through the operation of fuel and tax clauses in the rate schedules.

FPC Studies Utilities' Rate Schedule

The Canadian River Gas Co. and Colorado Interstate Gas Co., have tendered for filing with the FPC revised rate schedules for natural gas sold at wholesale, which will be studied by the Commission to determine whether they carry out the reductions provided in the Commission's order of March 18, 1942, as amended April 14, 1942. The FPC orders, which were sustained by the Supreme Court of the United States on April 2, 1945, directed Canadian River to reduce its interstate wholesale natural gas rates by not less than $551,000 annually, and Colorado Interstate to reduce its rates by at least $2,065,000 a year.

Hayward Industries Acquire Security Valve Corp.

Hayward Industries of Los Angeles has announced the acquisition of the Security Valve Corp., manufacturers of Sentinel operated gas shut-off valves.

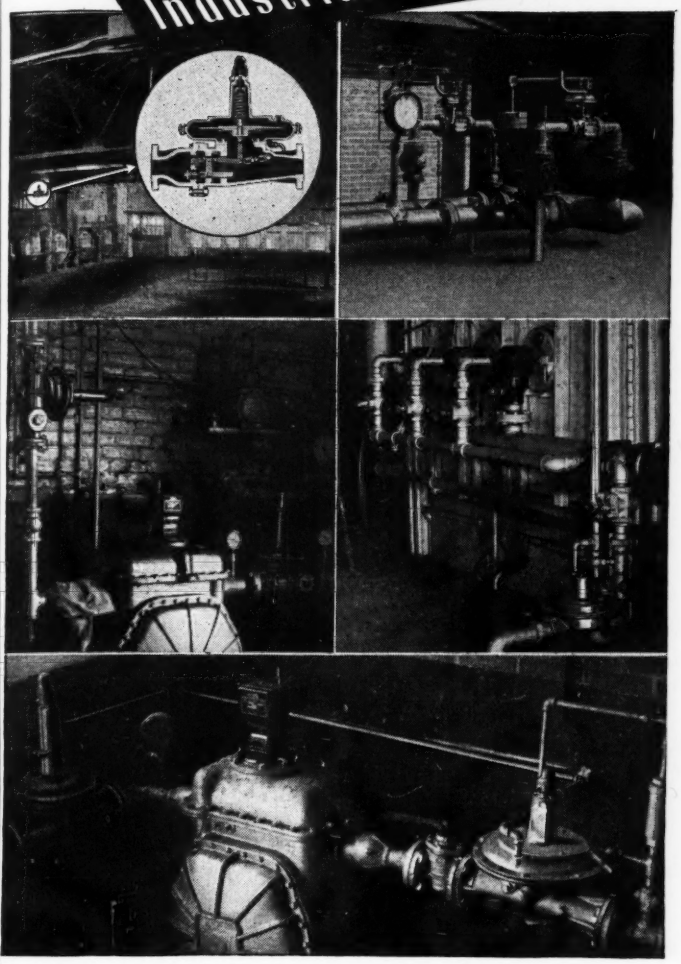
The Hayward organization will continue operation of the company under the Security Valve Company name. F. W. McRae continues his association with the concern and will serve the new organization as sales manager. Operations are under the direction of R. W. Arnett, general manager. Offices are located at 410 San Fernando Rd., Los Angeles.

Pittsburgh Shortage Affects 65 War Plants

Fuel gas for 65 Pittsburgh district war plants was cut July 10 by a CIO strike tying up operations of United Fuel Co. of Pennsylvania, West Virginia, Virginia, Ohio, Kentucky, and New York.

Major E. H. Gallup, Jr., of army ordnance, flew to Charleston, W. Va., and obtained an agreement for release of 100,000,000 cu. ft. of gas daily by reopening lines of the Tennessee Gas & Transmission Co. at Kenova and Clendennis, W. Va., for industrial users.

...REYNOLDS offer a Complete Range of Industrial Gas Controls



A Series of Industrial Installations

REYNOLDS offer greater Capacity—Increased Range—Quicker Response—all features of REYNOLDS Gas Regulators for Industrial Control. They assure smooth, constant outlet pressure and volume. Manufactured in single or double valve construction, REYNOLDS Industrial Regulators are proved by performance in factory tests and on installations throughout the country.

BRANCH OFFICES

423 Dwight Building
Kansas City, Missouri

2nd Unit—Santa Fe Bldg.
Dallas, Texas

REPRESENTATIVES

Eastern Appliance Company
Boston, Massachusetts

Wm. A. Ehlers
No. 268 Park Street
Upper Montclair, N. J.

RECOGNIZED GAS CONTROL SINCE 1892

REYNOLDS GAS REGULATOR CO.
ANDERSON, INDIANA, U. S. A.

Seal of Quality

Hammel RADIATOR ENGINEERING CO. SINCE 1912

HAMMEL GAS HEATERS

Sell COMFORT SAFETY & BEAUTY

Sell Hammel gas heating equipment. Learn all their sales-making advantages. Write today!

YOU NEED A COMPLETE LINE for selling to the postwar new home market and replacement market whether you're a builder, architect or dealer. And HAMMEL is ready with a new improved line of ultra modern gas heating and ventilating appliances. Every unit—gravity furnace, floor furnace, wall heater, winter air conditioner, dual furnace and console heater—carries the HAMMEL seal of quality and the AGA seal of approval.

A few territories are open for dealerships. Write for free catalog featuring the complete line of HAMMEL gas heating equipment.

Hammel
RADIATOR ENGINEERING CO.
A. S. Martinson & Associates
Successors to Hammel Radiator Corp.
3348 Motor Ave. SINCE 1912 Los Angeles 34

LIKE CARRYING A LABORATORY IN ONE HAND
The ARCCO-ANUBIS PORTABLE GAS BALANCE weighs only 20 pounds complete with carrying case—yet measures specific gravity of gases in the field with laboratory accuracy.
Ruggedly constructed and entirely self-contained, this gas balance will stay accurate in the hardest field service. There is no tinkering—it is easy to operate, easy to read, and no accessories are required. Hundreds in use by major companies.
SEND FOR BULLETIN NO. 101
AMERICAN
RECORDING CHART CO.
3113 E. 11th St. Los Angeles 23, Calif.
SEND FOR COMPLETE LIST OF ARCCO CHARTS

New Booster Plant To Have 1000-hp. Gas-Diesel Engine

The installation of a 1000-hp. Cooper-Bessemer Diesel-natural gas compressor station to be built at Dana Point, Calif., is scheduled to start September 15. It is the first installation of its kind anywhere and can be switched from natural gas to Diesel oil without shutting off the engine.

Cost of the project, which will increase delivery capacity of the San Diego, Calif., pipeline by 7,000,000 cu. ft. daily, is estimated at $200,000.

Southern Counties is also planning a new booster station, to be known as the Jalama station, which will approximately double the capacity of the Santa Maria to Goleta transmission line to deliver Santa Maria field gas south to Goleta, according to an announcement by Fred Hough, executive engineer of the company.

Women Oilers Employed An Panhandle Station

The Sneed (Okla.) Compressor Station of the Panhandle Eastern Pipe Line Co. has established the record of being the first station in the Panhandle family to inaugurate the use of women in plant operation. Six girls are now working in the main compressor engine room. They are successfully performing some of the duties of men in the corresponding classification of oilers, thus relieving men for heavier and higher skilled duties in the oiler classification.

Canadian Co. Starts Drilling Near Lake Erie

In a new effort to tap under Lake Erie for natural gas, drilling was started late in July by West Petroleums, Ltd., of Toronto, Ontario, Canada, on a well located more than a mile offshore and near one drilled by the company in 1943 with fairly promising results.

The company plans to start drilling another well shortly, with the expectation that both will be completed this season.

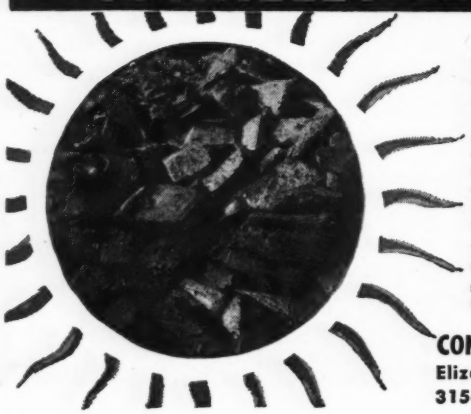
AWARDS

• **The Empire Stove Co.,** Belleville, Ill., peacetime manufacturers of gas cooking and heating appliances, has been awarded the Army-Navy "E" for "outstanding achievements in the design and manufacture of airplane smoke tanks and for the rapidity with which they converted to the production of incendiary bomb cluster adapters for use against Japan."

• **The Hartford Gas Co.,** Hartford, Conn., has received a national security award, given by the national office of civilian defense in recognition of a "superior standard of protection and security." The presentation was made on June 28.

• The Homestead Valve Manufacturing Co., Corapolis, Pa., has been awarded a fourth gold star to be added to its "M" pennant, in recognition of continued production achievement.

CONNELLY IRON SPONGE



High in efficiency . . . low in cost. In hundreds of plants throughout the country, Connelly Iron Sponge has proven itself . . . the finest purification material on the market. Not only does it lower your purifying cost but its high activity and capacity tends to reduce distribution and service complaints because of the cleaner gas which ultimately lowers operating and maintenance costs.

If you have a problem in gas purification, Connelly's 68 years of experience is at your service. Our engineers can help you . . there is no obligation on your part.

CONNELLY IRON SPONGE & GOVERNOR CO.
Elizabeth, N. J. Los Angeles, Calif.
3154 S. California Ave., Chicago 8, Illinois